CARLOAD SERVICE: WHY IS IT SO ERRATIC? p. 12

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How Amfleet saved Amtrak

The right cars at the right time solved an equipment crises p. 18

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Delayed trains, no crews. What's going wrong? p. 28

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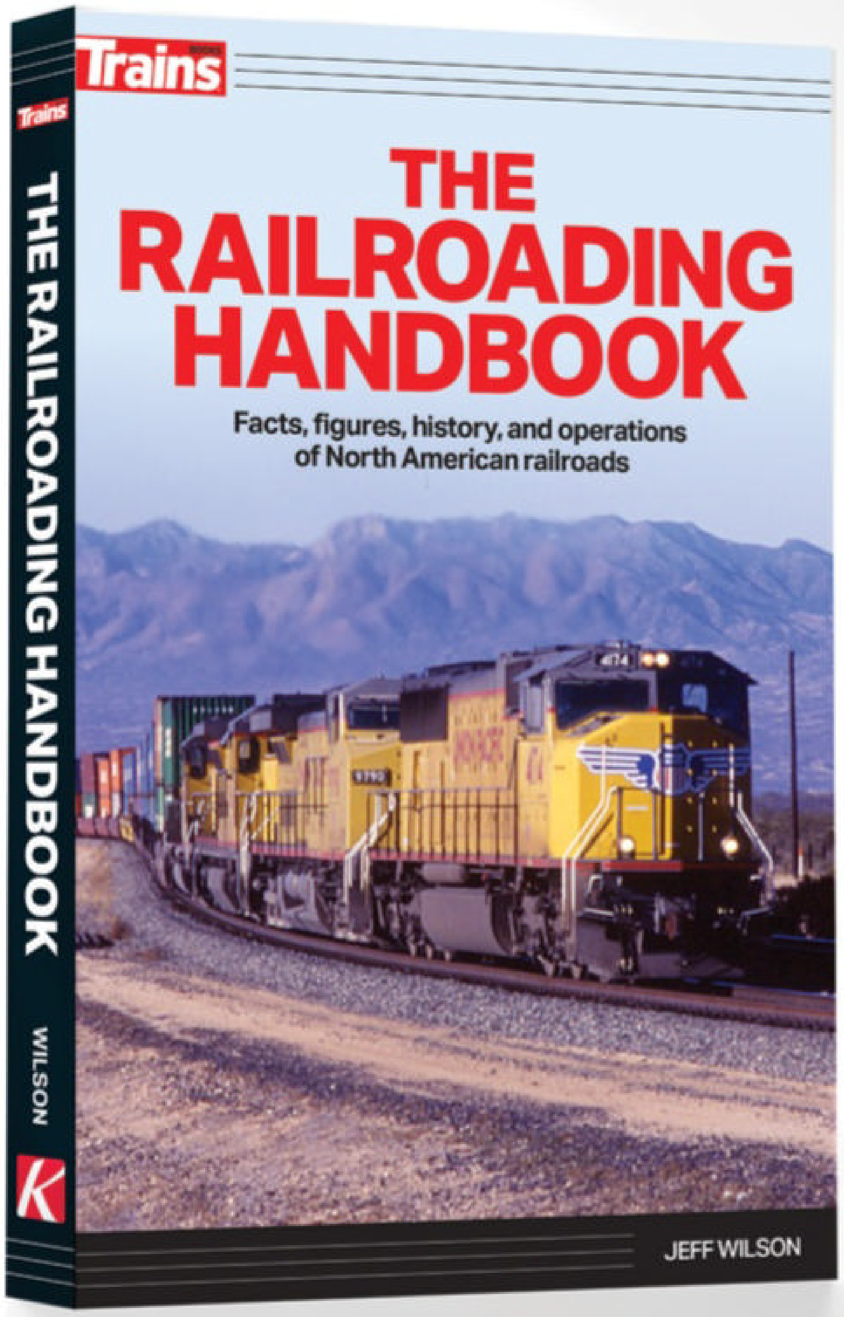
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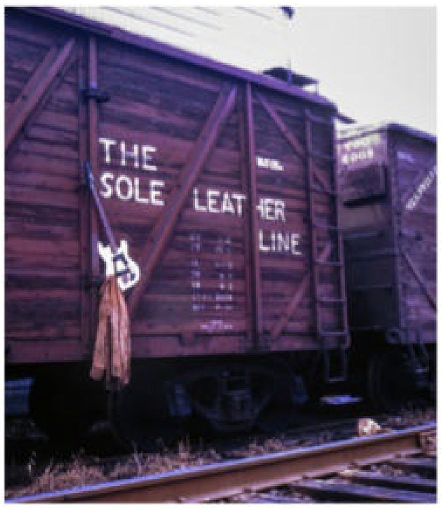

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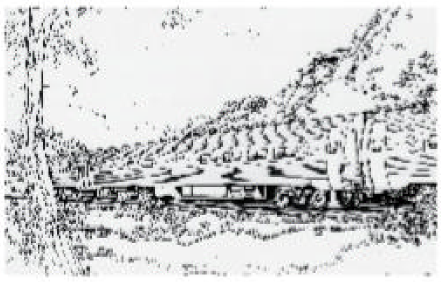

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From the Editor

Carl Swanson
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The numbers tell the story. Crew shortages on Class I railroads crippled on-time performance for much of 2022. But what do those numbers mean in the real world? To find out, Bill Stephens traveled across country, rented a car, and drove along the BNSF from Barstow, Calif., to Belen, N.M. Normally this line is a model of efficiency but what Bill found on BNSF's Transcon was a tale of two railroads. On one railroad hotshot Z trains and guaranteed service Q-symbol stack trains roared along at track speed and enjoyed lightning-fast crew changes. But other trains weren't moving very well and sometimes weren't moving at all. Turn to page 28 for Bill's first-hand look at a persistent — and nationwide — problem.

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CP-KCS decision now rests with regulators

STB wraps up hearing, accepts final filings; decision expected in January

▲ **A northbound Kansas City Southern manifest freight passes a stopped TEUX empty coal train at Page, Okla., on KCS's Heavener Subdivision on April 15, 2022.** Doug Koontz

REGULATORY REVIEW of the Canadian Pacific-Kansas City Southern merger reached the home stretch in October after seven days of public hearings on the first combination of Class I railroads in two decades. Now it's a waiting game.

The Surface Transportation Board received final briefs on the merger on Oct. 24 and must issue a CP-KCS decision by late January. The merger — which analysts and industry observers expect will be approved — would become effective 30 days later, allowing CP to take full control of KCS.

CP and KCS argue that the $31 billion merger should be approved without conditions beyond promises the railways have made regarding service, interchange protections, Amtrak and commuter trains, and deals reached with lineside communities that would be affected by increased train traffic.

But the other Class I railroads disagreed. They asked the STB to put teeth behind promises that Canadian Pacific Kansas City would keep gateways open on reasonable terms, including at the busy U.S.-Mexico border crossing at Laredo, Texas.

In its final brief, Canadian National said it would be willing to accept trackage rights over the KCS line linking Springfield, Ill., with Kansas City and St. Louis. Previously CN had called only for divestiture of the line, which would allow it to create a new single-line route from Kansas City to Chicago, Detroit, and Eastern Canada.

Union Pacific sparred with CP and KCS over capacity in the complex Houston terminal, where KCS's cross-border traffic relies on trackage rights over UP. CP and KCS say there's plenty of capacity for the eight additional trains the merged railroads expect to run, particularly if UP stopped parking long trains on the main line while they arrive or depart Englewood Yard. UP, in turn, said CPKC's plans to run 12,000-foot trains would tie up multiple key junctions simultaneously, which would hurt local service to the 900 customers in the Houston terminal.

CN and Metra raised similar concerns about the merger's impact on freight and commuter operations in Chicago.

CP and KCS made their closing arguments on the hearing's final day, telling regulators the combination was in the public interest and that critics either didn't do their homework or were seeking conditions that would stifle competition. They also said the merger would not create operational problems in Chicago or Houston.

The hearings were initially set for three days, but STB Chairman Martin J. Oberman said he didn't want to rush the railroads or board members. "There's just too much at stake here," he says of what's likely to be the last Class I railroad merger. — *Bill Stephens*

A buffer coach follows the *Park* observation car on the westbound *Canadian* near Kamloops, British Columbia, on Oct. 19, 2022. Russ Grycan

Structural concerns lead to buffer cars for VIA Rail Canada heritage trainsets

Government order requires extensive tests, but cars are called safe for normal use

CITING CONCERNS RAISED by an independent consultant, VIA Rail Canada began operating trains with unoccupied buffer cars at the ends of consists with stainless steel, head-end-power-equipped heritage rolling stock in mid-October.

VIA's move was followed by a safety order from Transport Canada, which formalized the buffer-car requirement and will likely require it through 2023. That order also set out an extensive program of inspection and testing to cover the HEP-1 cars, manufactured for Canadian Pacific in 1955, and the HEP-2 equipment, mostly built by the Budd Co. in the 1950s, acquired from Amtrak, and modernized by VIA in the 1990s.

The order indicates the existence of widespread concerns regarding the integrity of the cars, but does not reveal the nature of the defects.

VIA said in a statement — and the safety order emphasized — that the cars "are safe to run under normal operating conditions" but that buffer cars have been added "to reduce the consequences in the unlikely event of a train-to-train collision."

Among the measures the order requires are a simulation of car performance in a collision, which was due at the end of October; a tear-down inspection of four cars with structural defects, and a compression test of two unrepaired cars, with reports on findings due Jan. 31, 2023. After that, VIA must perform a compression test of a fully repaired car "to validate the repair methodology and provide ... an assessment of how test outcomes will inform future repairs and mitigating measures" by Dec. 31, 2023.

VIA said it had set up a joint technical task force to analyze the results of inspections by engineering firm Hatch and develop a repair program. That task force includes current and former VIA employees and Hatch representatives.

To comply with the order, VIA's flagship *Canadian* began operating with empty cars behind its *Park*-class dome-lounge-observation, which is part of its premium-priced Prestige class service. Other trains, such as the train to Churchill, Manitoba, which operates with a *Park* car during fall polar-bear watching season, ran with that car closed to passengers.

Along with those trains, the order affects remote-service trains in Quebec; six consists operating in the Quebec-Windsor corridor that use heritage trainsets; and the Montreal-Halifax, Nova Scotia, *Ocean*, which operates with a mix of HEP and European-built Renaissance equipment. Those trains already carried buffers between the Renaissance and heritage cars because of the differences between the two types of equipment.

An unoccupied car, now required under a Transport Canada order, carries the markers for the *Canadian* at Otterdale, Ontario, on Oct. 17, 2022. Chris Wilson

Because the order requires buffer cars at both ends of the consist, VIA also halted carriage of pets in its baggage cars and closed those cars to passengers. The company had previously allowed passengers to enter the cars to tend to their pets. This represented a significant inconvenience for passengers on the remote-service routes using the heritage equipment; pet transport on those routes is widespread. — *Bob Johnston*

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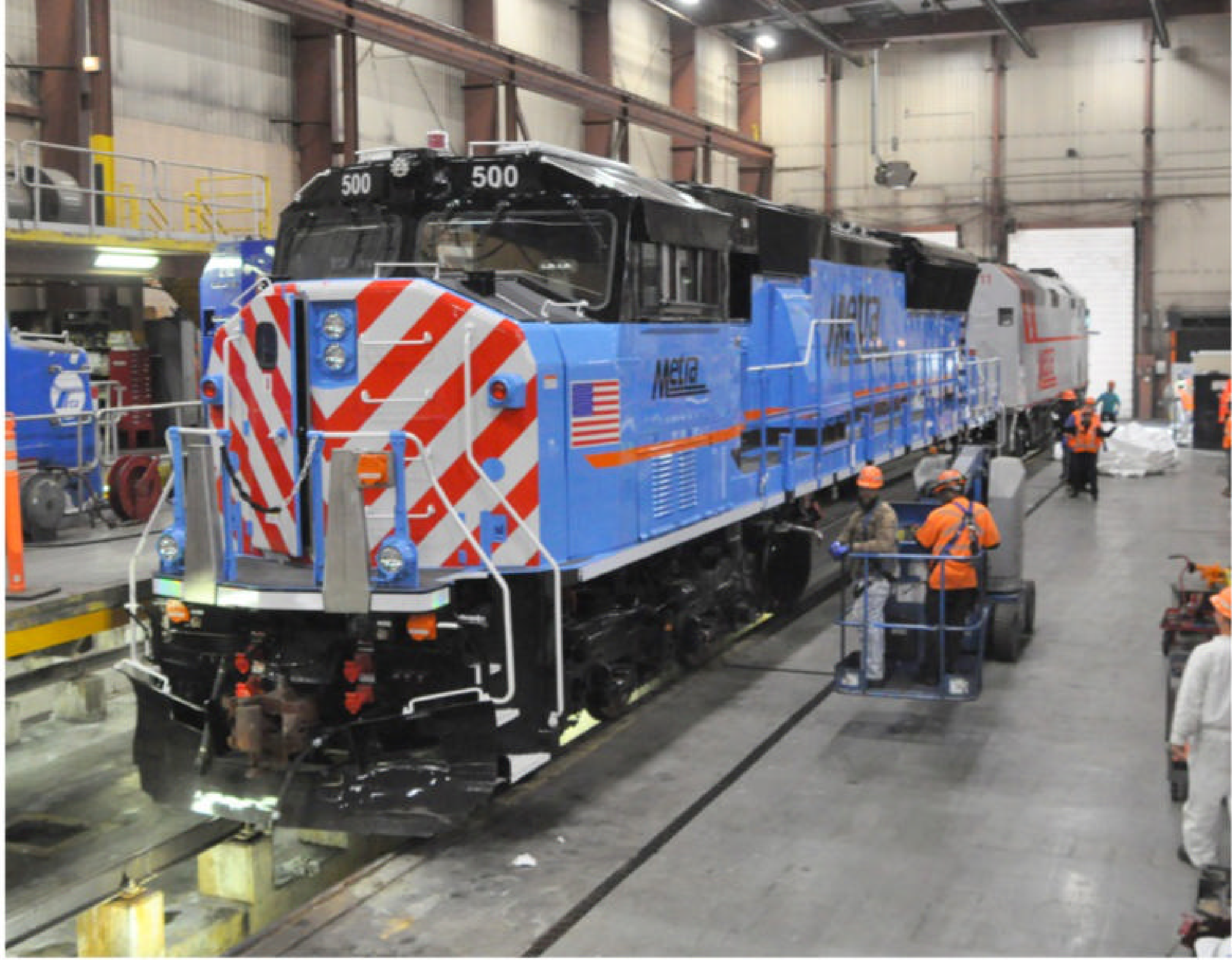
Metra receives first rebuilt SD70MACH

Remanufactured freight diesel marks return of six-axle power, first with AC traction motors



Wearing the paint scheme of the predecessor Regional Transportation Authority, Metra's first SD70MACH is unwrapped on delivery at BNSF's 14th Street Shops on Oct. 11, 2022. Mark Llanuza

METRA'S FIRST SD70MACH locomotive has been delivered, marking the return of six-axle commuter diesels to Chicago after more than a decade, as well as the introduction of AC power.

The locomotive is the first in a 15-unit order rebuilt from former Kansas City Southern/Transportación Ferroviaria Mexicana SD70MACs sourced from Progress Rail's locomotive fleet. While the balance of the order will arrive in Metra's current paint scheme, No. 500 was painted to commemorate the upcoming 50th anniversary of the creation of the Regional Transportation Authority in 1974.

In announcing arrival of the first unit, Metra highlighted the greater durability of AC power, noting that it currently replaces about 160 DC traction motors annually, while it has never had to change an AC traction motor in 14 years of operating AC-powered cars on the Metra Electric line.

The locomotives will also be Metra's first with the B1-1B truck arrangement, in which the two axles closest to the fuel tank are unpowered. This allows four of the locomotive's six AC inverters to be assigned to the traction motors, with a fifth used for HEP, and the sixth as a spare for either traction or HEP in case of inverter failure. When the SD70MACH is operating normally, the fifth and sixth inverters will alternate HEP duties to keep usage uniform across the equipment.

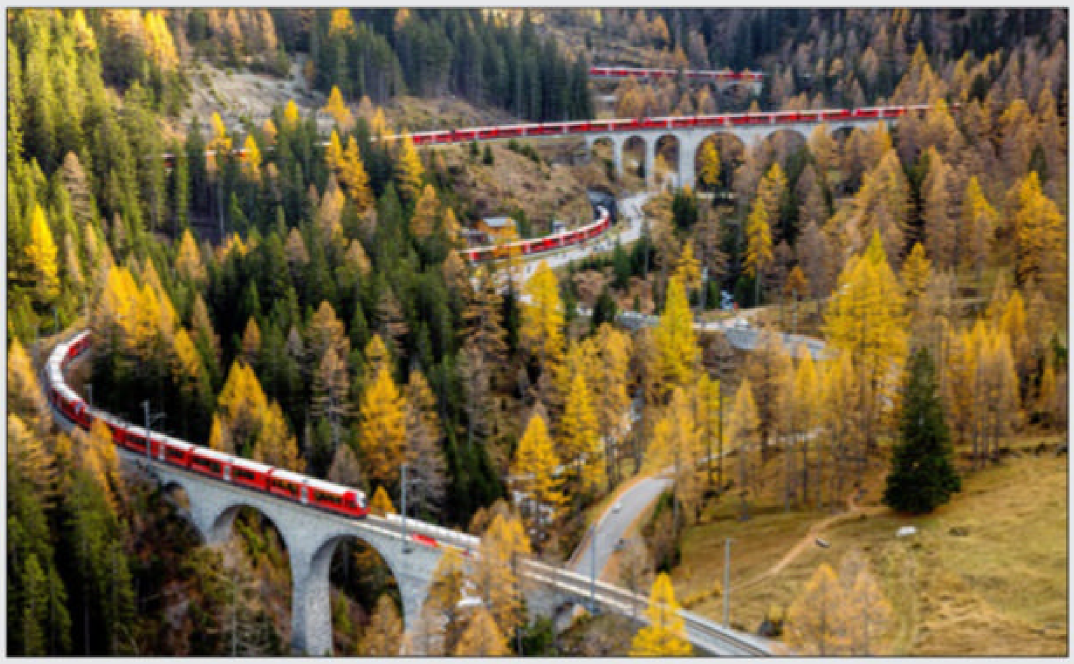
Under current federal emission standards, SD70MACs such as these would fall under the Tier 0 emission requirement, the lowest emission standard. Metra chose to upgrade the SD70MACHs to Tier 3 emissions, requiring the addition of flared radiators on the long hood to accommodate the additional engine cooling needed.

While six-axle commuter power has traditionally been rare, Metra has the most six-axle experience of any agency in North America. The newest locomotive will be its fourth six-axle model, with its third truck configuration. Previously, it operated former Chicago & North Western E8s and Burlington Northern E9s, with the A1A configuration, as well as C-C-trucked F40Cs purchased new by Metra's predecessor, the Regional Transportation Authority, in 1974. They were essentially a SDP40F with head-end power instead of steam generators.

Metra expects to receive approximately one new SD70MACH per month starting in November. It has options for up to 27 more.

Revenue service is still some time off, with crew and mechanical training just begun along with resolving any bugs that inevitably arise during the delivery of a new locomotive order. That testing is not just going on at Metra; there's also an SD70MACH at the Transportation Technology Center in Colorado. — *Chris Guss*

NEWS PHOTOS



SWITZERLAND'S RHÄTISCH BAHN marked the 100th anniversary of its electrification and 175 years of Swiss railroading by setting a record for the longest passenger train, with 100 cars, on Oct. 29, 2022. The meter-gauge train was 1.9 kilometers long (2,078 yards, or 1.18 miles), and was made up of 25 four-car electric multiple-unit trainsets built by Switzerland's Stadler. It made a 15.6-mile trip from Preda (at 1,788 meters, or 5,866 feet) to Alvaneu (at 1,000 meters, or 3,281 feet). It traveled mostly around 20 mph and, using electrical regenerative braking, generated 4,000 kilowatt-hours of power. The train had seven engineers, 21 other technical personnel, and hundreds of passengers. It broke a record set by a 70-car train that ran from Ghent to Ostend, Belgium, in 1991, which remains the record for a locomotive-hauled train. — *Keith Fender*

Rhätisch Bahn/Philipp Schmidli

Digging in to mark the groundbreaking for CREATE's Forest Hill Flyover are, from left, AAR CEO Ian Jefferies, Metra CEO Jim Derwinski, Chicago Mayor Lori Lightfoot, Illinois Gov. J.B. Pritzker, CSX Chief Legal Officer Nathan Goldman, Cook County Board President Toni Preckwinkle, U.S. Rep. Bobby Rush, and U.S. Sen. Dick Durbin. David Lassen

Officials congregate for launch of latest CREATE project

Forest Hill Flyover, 71st Street grade separation will begin untangling 75th Street Corridor bottleneck

TO WEIGH THE SIGNIFICANCE of groundbreaking for Chicago's Forest Hill Flyover and a related grade-crossing project, consider the adage that "success has many fathers, but defeat is an orphan."

Then consider the 13 speakers and many other representatives from federal, state, county, and local government that were part of the ceremony for that groundbreaking.

This project is a big deal — both in impact and by price tag, part of the biggest in the 70-project menu for the Chicago Region Environment and Transportation Efficiency program, or CREATE. So everyone wants to be seen as part of the solution to Chicago's biggest railroading bottleneck.

The work will build a bridge to carry a north-south CSX Transportation main line over east-west tracks used by Norfolk Southern, Metra, and the Belt Railway of Chicago, eliminating two sets of at-grade diamonds. It will also build an underpass at 71st Street, replacing a much-blocked grade crossing.

There actually had been an a prior groundbreaking in 2018. But this time, it came on the verge of actual work: all funding and permitting is set, and portable construction-company offices are in place next to the groundbreaking site.

This is part of the far-larger 75th Street Corridor Improvement Project, a massive untangling of lines that also involves Union Pacific and Amtrak. The overall project was eventually broken into pieces as its overall cost reached more than $1.5 billion. The estimated cost of this portion is about $380 million; it received a $132 million grant in 2018 and has lined up $260 million in state, local, and railroad funding.

Several speakers highlighted that cooperative effort between levels of government and private entities as the key to starting this project, and to the success of CREATE in general, which so far has completed 33 projects. And some suggested that while its achievements were local, its importance as a model for infrastructure work could, or should, extend well beyond Chicago.

"This is a really critical model we need to use nationally," said U.S. Rep. Marie Newman (D-Ill.), a member of the House Committee on Transportation and Infrastructure. Seconding that notion was Surface Transportation Board Chairman Martin J. Oberman.

"I have held CREATE out as an example in recent years, particularly for the gateways in Houston and New Orleans, which very much, although on a smaller scale, have the same congestion we have here," Oberman said. "And I have recommended to them, and will continue to do a little bit more than recommend … that they implement a CREATE-like project."

Chicago Mayor Lori Lightfoot pointed out the operational impacts that will come from separating the right-of-ways at a spot where "30 Metra and 90 freight trains cross each other's paths each day," while Metra CEO Jim Derwinski said the impact would extend far beyond the project site.

"What we've realized through CREATE is when you fix one part of this network, you actually start seeing benefits anywhere from five to 100 miles out," Derwinski said. "It's really impressive." — *David Lassen*

NEWS BRIEFS

Hurricane hammers Florida short line

The 105-mile **SEMINOLE GULF RAILWAY** in southwest Florida sustained an estimated $28 million in damage as a result of Hurricane Ian, including washouts to six major bridges. The railroad, based in Fort Myers and the only freight operator on the state's southern Gulf Coast, hosted a group of government officials in mid-October in an effort to gain support for emergency federal aid. The railroad says with that help, it could reopen within 90 days to help transport supplies for rebuilding the Fort Myers area, which was devastated by the hurricane.

Denver-based **OMNITRAX** agreed to purchase the assets of the 155-mile **SAN LUIS & RIO GRANDE RAILROAD**, a former **IOWA PACIFIC HOLDINGS** property that has been in bankruptcy for three years. The SL&RG, a former Denver & Rio Grande Western line connecting Alamosa and Antonito, Colo., to the Union Pacific at Walsenburg, Colo., will become the 26th OmniTRAX railroad. The company reportedly offered $5.75 million; almost $4 million will address back taxes.

STEVE POFTAK announced he would step down as general manager of the **MASSACHUSETTS BAY TRANSPORTATION AUTHORITY** on Jan. 3, 2023, after four years at the helm and a year before the end of his contract. Poftak was credited by many for leading the agency through the COVID-19 pandemic and a series of operational issues that led to **FEDERAL TRANSIT ADMINISTRATION** safety directives, but also was heavily criticized by the state's U.S. senators during an October hearing on MBTA shortcomings.

Two construction workers on the Ben Franklin Bridge, linking Philadelphia and Camden, N.J., were struck and killed by a **PATCO SPEEDLINE** commuter train on Oct. 14. A **NATIONAL TRANSPORTATION SAFETY BOARD** preliminary report says the men were on a track scheduled to be closed to accommodate concrete work, but that they entered before the track was shut down. The train was traveling at 33 mph when the engineer saw the men but was unable to stop in time. The NTSB and **DELAWARE RIVER PORT AUTHORITY**, which operates the bridge and owns the Port Authority Transit Corp., are among those investigating.

When daily service just isn't enough

Amtrak, freight railroads should step up service frequency

Bill Stephens
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Analysis: Trains.com

Railroads have what you could call a one-train problem. That is to say they offer but one daily departure from Point A to Point B. A case in point is Amtrak's *Pennsylvanian*, which links New York City and Pittsburgh.

I wanted to ride Amtrak to a rail shippers conference in the Steel City. I'm blessed to live in Western Massachusetts, where we are well connected to the Northeast Corridor. From Springfield Union Station you can catch Amtrak's *Valley Flyer* or CTrail commuter service to New Haven and a cross-platform connection to *Acela*, *Northeast Regional*, or Metro-North to the Big Apple and beyond. Or for a one-seat trip you can take the *Vermonter* or our lone inland route *Northeast Regional* train.

But good luck trying to get to Pittsburgh.

If you're willing to get up at o-dark-thirty you can catch 5:10 a.m. or 5:45 a.m. trains from Springfield to New York Penn Station. I am not willing to lose shuteye. And I suspect other potential passengers are put off by having to get up before sunrise only to have to linger at Penn Station for an hour or two to wait for the once-daily *Pennsylvanian*'s 10:52 a.m. departure.

If you want to travel at a civilized hour, technically it's possible to take the 7:05 a.m. *Valley Flyer* No. 471 from Springfield to New Haven and *Northeast Regional* No. 171 from New Haven for a 10:22 a.m. arrival at New York Penn. Possible, yes. Advisable? Well, no. If the Springfield-New York trains are on time you'd have a scant 30 minutes to make the connection. Is that enough time? I asked our Amtrak man, Bob Johnston, if he'd try this trip. It took a millisecond for him to say no way, noting that Amtrak's online ticketing system won't even let you book a trip with such a tight connection.

Amtrak's westbound *Pennsylvanian* rolls through Huntingdon, Pa., en route to Pittsburgh in April 2022. Passenger routes like this one create a "one-train problem" in terms of scheduling. Bill Stephens

So as I type this I am sorry to say that I am aboard Southwest flight No. 237 to Pittsburgh. I'd much rather be rounding Horseshoe Curve on train No. 43.

The one-train problem proved to be an insurmountable barrier. And you have to wonder how many other people living near God knows how many Amtrak stations remain would-be passengers — instead of paying customers — simply because there's just one daily train from here to there. And there are a lot of them. Think of any train with a name, from *Adirondack* to *Vermonter*, and it departs once a day in each direction at a time that may or may not be convenient.

Worse still are the triweekly *Sunset Limited* and *Cardinal*. Memo to Amtrak: Make these trains daily or put them out of their misery.

Class I railroads typically offer a single daily departure between intermodal terminals. The impact is a bigger deal in the East than the West because of length of haul. In the East, a container may spend as much time sitting in terminals as it does riding the train between terminals. The total dwell of 24 hours can be the primary consideration that ultimately pushes loads to the roads.

The solution to the one-train problem is obvious: Add a second departure. That way, if you don't make the connection or your container misses the train, the delay is measured in hours, not days. It also gives passengers or shippers more options and flexibility, which only increases the likelihood that they'll decide to use the train.

Fortunately, Amtrak and Norfolk Southern this year inked a deal to launch a second *Pennsylvanian* once $200 million in state-funded capital improvements put more iron in the ground between Harrisburg and Pittsburgh. Amtrak's Connects US expansion plan proposes more frequent service in several corridors, too.

On the freight side, give NS credit for adding a second daily departure in its key Chicago-Atlanta intermodal lane over the summer. This can cut terminal dwell in half, effectively shaving as much as 12 hours off ingate-to-outgate transit time. It's a simple service improvement that will enable NS to gain more intermodal volume while helping customers improve their box turn times.

But there needs to be a lot more of this. When people say they're taking the train it shouldn't literally mean the one and only train. I

Correction: My October column overstated the extent to which BNSF Railway outgrew the other three big U.S. Class I railroads. Norfolk Southern also showed volume growth on a carload and intermodal unit basis, despite a slight decrease in gross ton-miles. For an updated version, go to Trains.com and type "Stephens BNSF corral" into the search bar.

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ALL ABOARD FOR A RAILROAD ADVENTURE!

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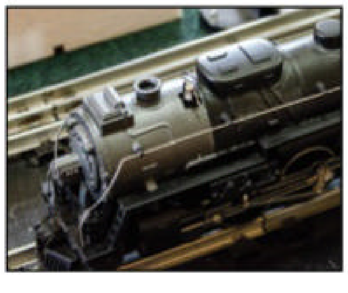
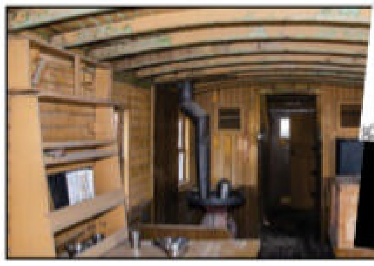


The Douglas Railroad Museum & Visitor Center is housed in the historic FE & MV Railroad Passenger Depot. The building is listed on the National Historic Register and is surrounded by seven historic railcars, including the Chicago Burlington and Quincy Railroad 4-8-4 Steam Locomotive #5633. Visitors to the museum are invited to go inside many of the rail cars, including a day coach, a dining car and a sleeper, as well as a little red caboose that was opened to visitors in 2019! And ask to see the model train on display in the back room.



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After Hunter Harrison's arrival at CSX with his precision scheduled railroading or PSR, railroad operations on CSX have undergone the most change since the Conrail split. This DVD shows the changes on CSX's busiest main line - their Chicago Line or Garrett Sub in northern Indiana in October 2019. And CP still runs a pair of intermodal trains on CSX's Garrett Sub. One hour 34 min. DVD or *Blu-ray* $34.95.

"PSR on NS's Premier Corridor in Northern Indiana"

This video shows the trains on NS's Chicago Line in northern Indiana, east of Elkhart, for over 36 hours in October of 2019. Norfolk Southern recently implemented their version of precision scheduled railroading on manifest trains. PSR on NS's Premier Corridor has resulted in longer trains and the first use of distributed power in over 35 years on this line. 2 disk set. Three hours and 15 minutes. DVD or Blu-ray $44.95.

"CSX Indianapolis Line Subdivision, a.k.a. The Bee Line"

This program shows over 24 hours of action on CSX's former Conrail and New York Central line between Cleveland and Indianapolis around Union City on the Ohio – Indiana border in October of 2019. It carries all of CSX's traffic from the East Coast and upper Midwest to Indianapolis and East St. Louis. This line is known today as the Bee Line because it runs in a relatively straight line between Cleveland and Indianapolis. 1 hour and 21 minutes. DVD or Blu-ray $32.95.

"Norfolk Southern's former Wabash Lafayette District"

This DVD shows the trains and operations on NS's Lafayette District west of Lafayette, Indiana for over twenty-four hours in October of 2019. This automotive artery hosts an eclectic mix of manifest, intermodal, auto and unit trains along with the last RoadRailers. It still deserves the nickname - Automotive Artery. One hour and 27 min. DVD or Blu-ray $34.95.

"CSX Nashville to Louisville and Evansville Mains"

This program shows 24 hours of action in April 2019 on CSX's Nashville to Louisville and then 24 hours on their Nashville to Evansville main lines. The Louisville to Nashville line was the original L&N main line. The Evansville to Nashville line is part of CSX's busiest route from the Midwest to Florida. Harrison's PSR has resulted in some trains being over two miles in length with many utilizing distributed power. 2 disk set. Two hours and 30 minutes. DVD or Blu-ray $38.95.

"The Trains of Northern New England 2018"

This DVD covers the trains and operations on all of the regional railroads - New England Central, Central Maine and Quebec, the Saint Lawrence and Atlantic, Vermont Rail System, and the largest, Pan Am Railways, in VT, NH, and Maine in the spring of 2018. It shows what has become of the MEC, B&M, BAR, CV, Rutland, and CN and CP lines in northern New England. And Pan Am still has an eclectic mix of power including "new" GEs. Two hours and 4 min. DVD or Blu-ray $34.95.

"The Alaska Railroad"

Alaska - the land of glaciers, incredible vistas, and the mountain known as Denali. 27 percent of the Alaska Railroad's revenues are from passengers. Yet this railroad has has distributed power and CTC. This DVD shows the trains and traffic including all scheduled passenger and freight trains on the ARR between Seward, Whittier and Fairbanks in September of 2016. 1 hour and 19 minutes. DVD or Blu-ray $32.95.

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Commuter rail anniversary

Looking back 40 and 70 years

Brian Solomon
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Blog: briansolomon.com/trackingthelight/
Podcast: Trains.com

January 1983 was a watershed moment for Northeastern commuter rail: on Jan. 1, 40 years ago, commuter operators Metro-North, NJ Transit, and SEPTA assumed commuter rail operations from Conrail. It was the culmination of a gradual shift from private railroad operations to publicly funded and operated commuter rail.

As a teenager, I observed this transformation without comprehending the gravity of what was happening. When I recall the early 1980s, I recall my fascination with the operations, the rolling stock, and the history of the legacy companies that set the stage for the play performed before my eyes. Over the previous quarter century, my father photographed commuter trains on the Central Railroad of New Jersey, Erie, Lackawanna, New Haven, New York Central, Pennsylvania, and Reading, among others. Although the historic names had been swept away by the maelstrom of the Penn Central and the emergence of Conrail, I thought of the railroads in terms of the old order. Indeed, many railroaders I knew still identified with the former companies.

The locomotives and trains offered tangible links to the past. Among my favorites were EMD FL9s, the dual-mode, diesel-electric/third-rail electrics specifically designed for operation into New York City's terminals. While I thought of them as "old" in the early 1980s, my father protested, "I remember when they were new!" And if the FL9s were old, the former Pennsylvania RR GG1 electrics were positively ancient. Their design dated to 1934, and following production of a GG1 prototype (known as 'rivets'), PRR ordered 138 production GG1s which served as the backbone of the electrified Northeast Corridor fleet.

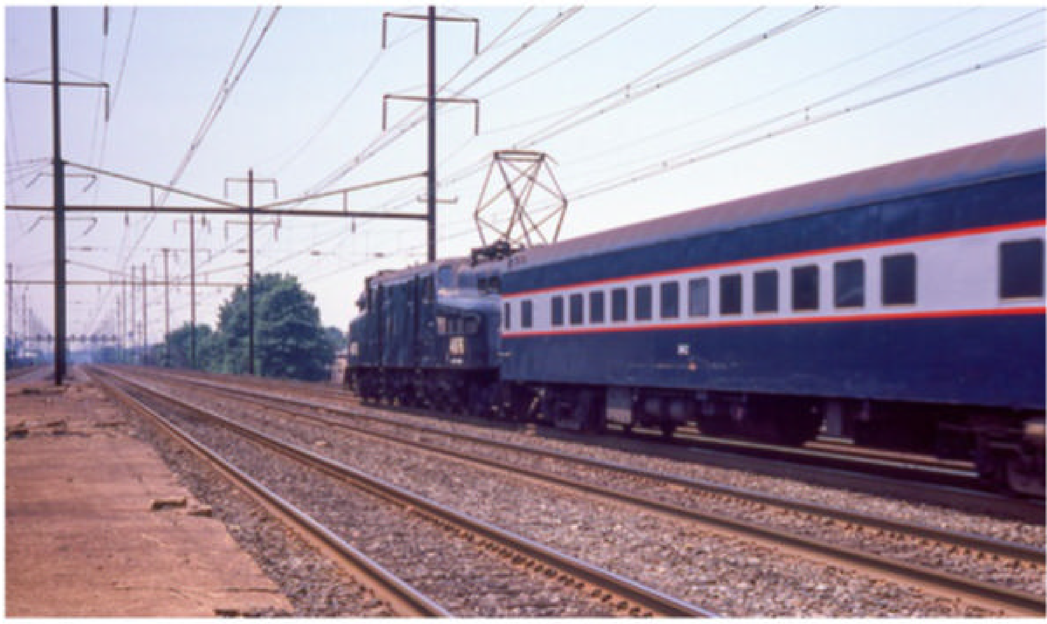
My family had a special rapport for the GG1, stemming in part from my father's Lionel model, given to him by my grandfather about 1947, and our travels along the Northeast Corridor when these leviathans of speed still dominated long-distance passenger haulage. I was particularly fascinated by Pennsylvania RR GG1 No. 4876, famous for its Washington Terminal runaway crash of Jan. 15, 1953. Not only had it survived its spectacular crash into the concourse and basement of Washington Union Station — an incident which resulted in its photo making the front page of newspapers across the continent — but by January 1983, it was among the handful of GG1 still running, rostered by New Jersey Department of Transportation/NJ Transit.

This is where the history gets confusing. In 1959, New Jersey had established a rail division of its state highway department to help subsidize railroad commuter services, which in 1966 came under the domain of the newly created NJDOT. By 1970, NJDOT began buying new commuter railroad equipment for operations in the state. Conrail assumed operations of commuter rail operations on April 1, 1976, and during this transition NJDOT acquired some of the legacy rolling stock assigned to commuter service, including former PRR/PC GG1s Nos. 4872 through 4884. All were built in 1939, and all retained their original PRR numbers. In 1981, NJDOT repainted GG1 No. 4877 into the PRR's 1950s livery variation, featuring Tuscan Red (in place of classic Brunswick Green) with five gold pinstripes. By contrast, my favorite, No. 4876, labored in relative obscurity, wearing a patched version of the Penn Central black with NJDOT lettering. The New Jersey Transit Corp. was formed in 1979 — better known as NJ Transit — which gradually assumed the public face of commuter operations.

On the eve of the 30th anniversary of the Washington Terminal crash, I wrote NJ Transit, explaining my interest in photographing the No. 4876 at work, wondering if they could supply its scheduled assignment for Jan. 15, 1983. I was delighted to receive a letter back with the information I requested. My father and I planned a trip to South Amboy, N.J. to make photos of No. 4876 on the anniversary of its famous wreck. Although predictions of a Nor'easter discouraged us from traveling that day, months later we caught up with No. 4876 working a Bayhead-Penn Station run.

NJ Transit GG1s made their final runs in October 1983, an event I documented on film. Although several of my favorites were saved from scrapping, among them Nos. 4876 and 4877, the sounds of their big motors and classic airhorns have been silent for 40 years. NJ Transit remains as the state's primary suburban rail.

Today, Bombardier dual-mode ALP45A diesel-electric/overhead electric locomotives work through trains on the North Jersey Coast Line to Bayhead among its other runs.



On June 27, 1983, former Pennsylvania Railroad GG1 No. 4876 leads an NJ Transit train bound for Penn Station, New York. The famous electric was in its final months of operation. Brian Solomon

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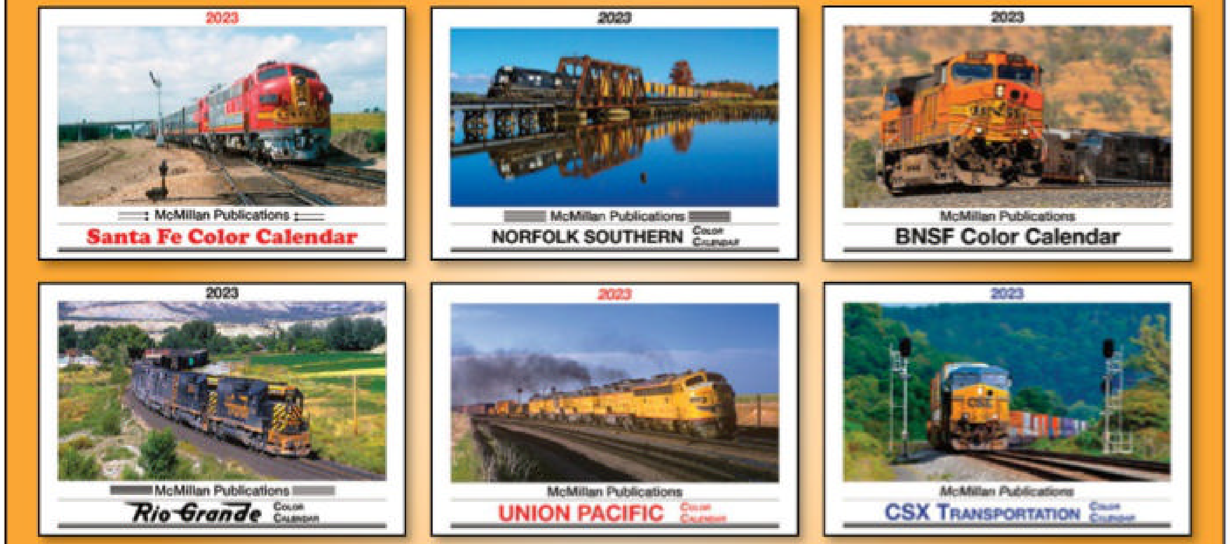
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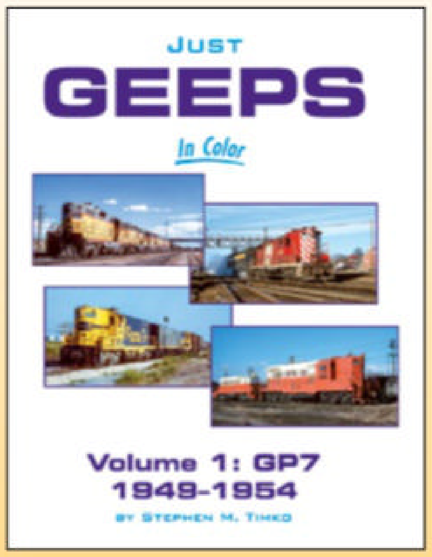
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Why carload service is erratic

An old problem threatens to make a comeback

By Victor Hand

THE NOVEMBER 2019 *Trains* contained an article by Bill Stephens titled “Who Shot the Boxcar?” One of the points Mr. Stephens made involved the erosion of carload traffic in recent years, driven in part by erratic service, what he calls “the service gap.”

Many years ago I attended a meeting between the president of a major railroad and his top operating officers. The president was from outside the railroad industry, but he was a quick study. He asked his vice president of transportation why a particular car movement could take seven days on one trip and 14 days on the next. He got the usual answers. “Weather.” “Equipment failure.” “Labor problems.” “Derailments.” “Floods.” “Plagues of locusts and other acts of God.”

Dissatisfied with these answers, the president commissioned a study to seek the cause of the erratic service.

A team of 20 analysts from various headquarters departments was assembled to do the study. The computer systems of the day were rather primitive, and no origin-destination traffic database of the railroad’s carload traffic was available. Programmers to create such a database for a one-shot study were also not available, so the study was done manually. Using car movement records, the details of the movement of a sample of more than 30,000 carloads were analyzed, and reasons for delays noted.

The results of the study came as no surprise to anyone who had worked as a low- or mid-level manager in the transportation department of a large railroad. The majority of the delays were caused by cars missing connections because a field manager had annulled a scheduled train, or a yard, interchange, or industrial switching crew in order to meet budget constraints. In some instances, the field managers failed to call extra crews when volume was heavy and yards became congested. This problem became worse towards the end of the monthly budget cycle.

You cannot blame these managers. Their job performance was measured by how well they met the requirements of their budget.

The typical carload movement depends on many different crews to get from its origin to its destination. A local freight or industrial switching crew will pull the car from the shipper’s siding, and it may be switched in a number of yards and move on a number of different road trains before reaching its ultimate destination and being placed on the receiver’s siding. Each step in the process requires a locomotive and a crew to perform the work. If a yard crew is annulled, the car will usually incur a day’s delay. If a scheduled road train is annulled because there is not enough tonnage for a heavy train, the car will wait for the next train to its destination, usually a day later. Some crews do not work on weekends, and a car arriving at a yard on a weekend might wait until Monday or Tuesday for handling.

> **You cannot blame these managers. Their job performance was measured by how well they met the requirements of their budget.**

Even on railroads that carefully plan the movement of each carload (as most do today), an annulled crew will disrupt the cycle and lead to delays, and once the programmed movement is interrupted, the delays to shipments compound.

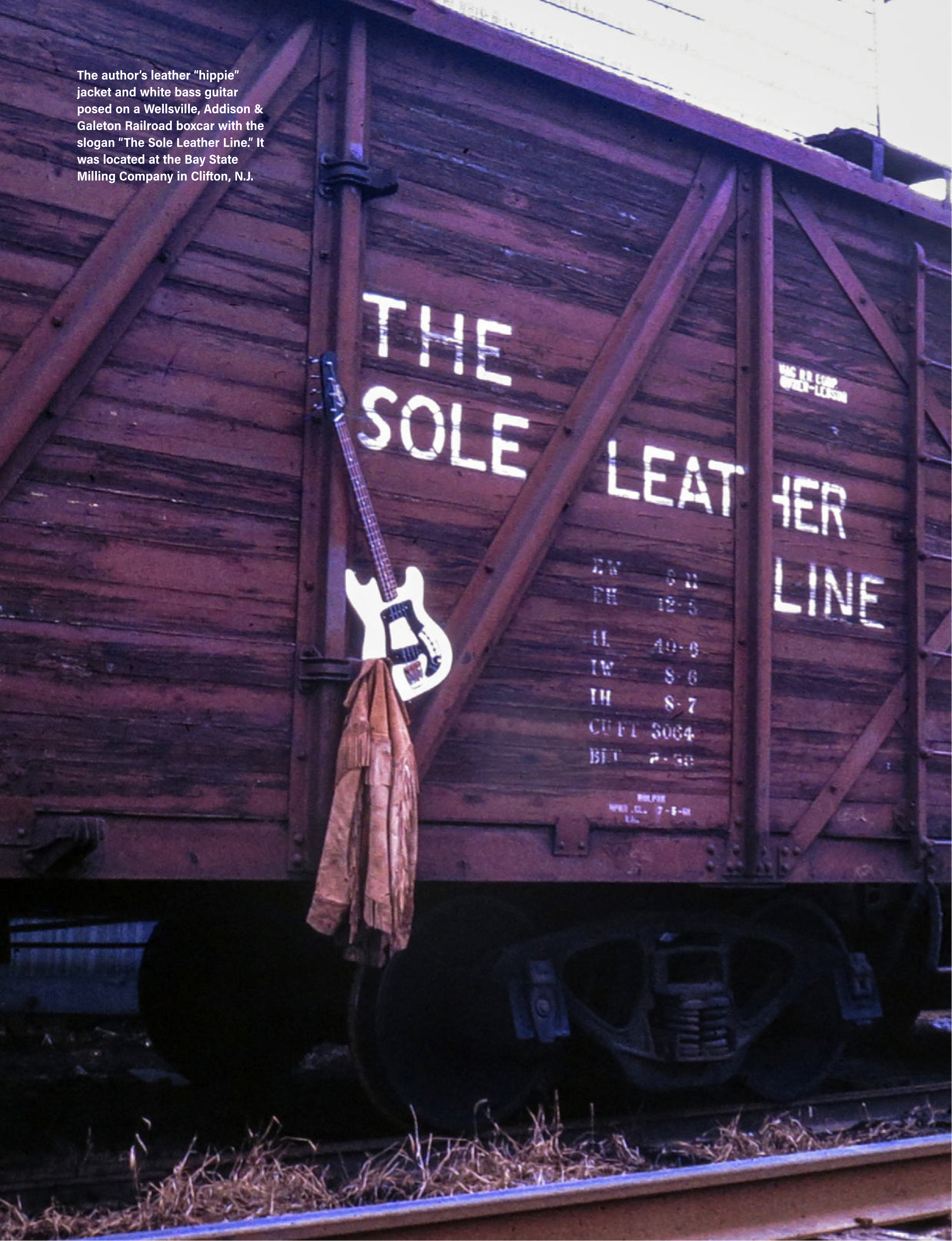
I am long retired and no longer involved in the management of railroads, but I suspect that this problem persists today, and is the major cause of erratic service.

The advent of Precision Scheduled Railroading will not solve the problem. Long, heavy, underpowered trains dragging

across the railroad carrying everything but the kitchen sink will not produce dependable service, and field managers are under intense pressure to squeeze every drop of efficiency out of the operation.

Readers should not get me wrong. I hope Precision Scheduled Railroading succeeds. Much of my retirement savings are invested in railroad stocks, which have done very well in recent years. But sooner or later the railroad industry will have a reckoning with Precision Scheduled Railroading, although I probably will not be around to see it. I

An eastbound Penn Central freight rolls through Parkhill, Pa., on Oct. 19, 1974, carrying a mix of traffic to Enola Yard to be sorted for forwarding to many destinations. A two-unit pusher is on the rear to assist in climbing the west slope of the Allegheny Mountains. Victor Hand, Center for Railroad Photography & Art collection


THE
SOLE LEATHER
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The author's leather "hippie" jacket and white bass guitar posed on a Wellsville, Addison & Galeton Railroad boxcar with the slogan "The Sole Leather Line." It was located at the Bay State Milling Company in Clifton, N.J.

TOO
6008
WELLS

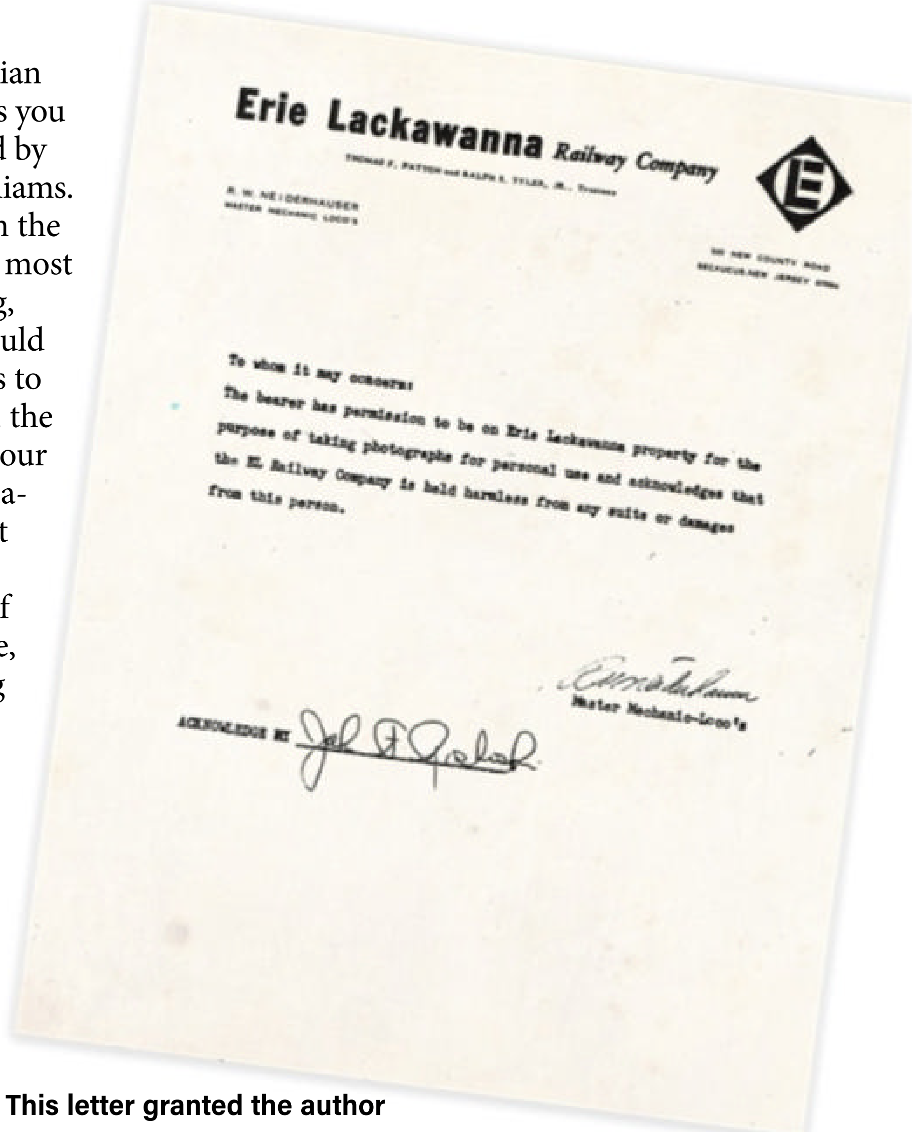
Remember the '60s?

From a string of wooden boxcars to an old drawer of cherished memories sprung a 'soleful' discovery

Story and photos by John Roskoski

LEGEND HAS IT that the paraprosdokian statement "If you remember the '60s you really weren't there" was first uttered by late comedian and actor, Robin Williams.

The '60s were an exciting time in the music and train world. We still had most of the pre-merger railroads running, and while out chasing trains one could listen on AM and FM radio stations to groups such as the Lovin' Spoonful, the Supremes, Herman's Hermits, the Four Tops, the Rolling Stones, the Temptations, and of course the Beatles. Not to forget the Turtles, the band my high school booked for our prom. If you were in a band during that time, that was just about as good as being invited into the Erie Lackawanna Croxton, N.J., yard office and being handed a letter granting you permission to be on their property taking photographs.



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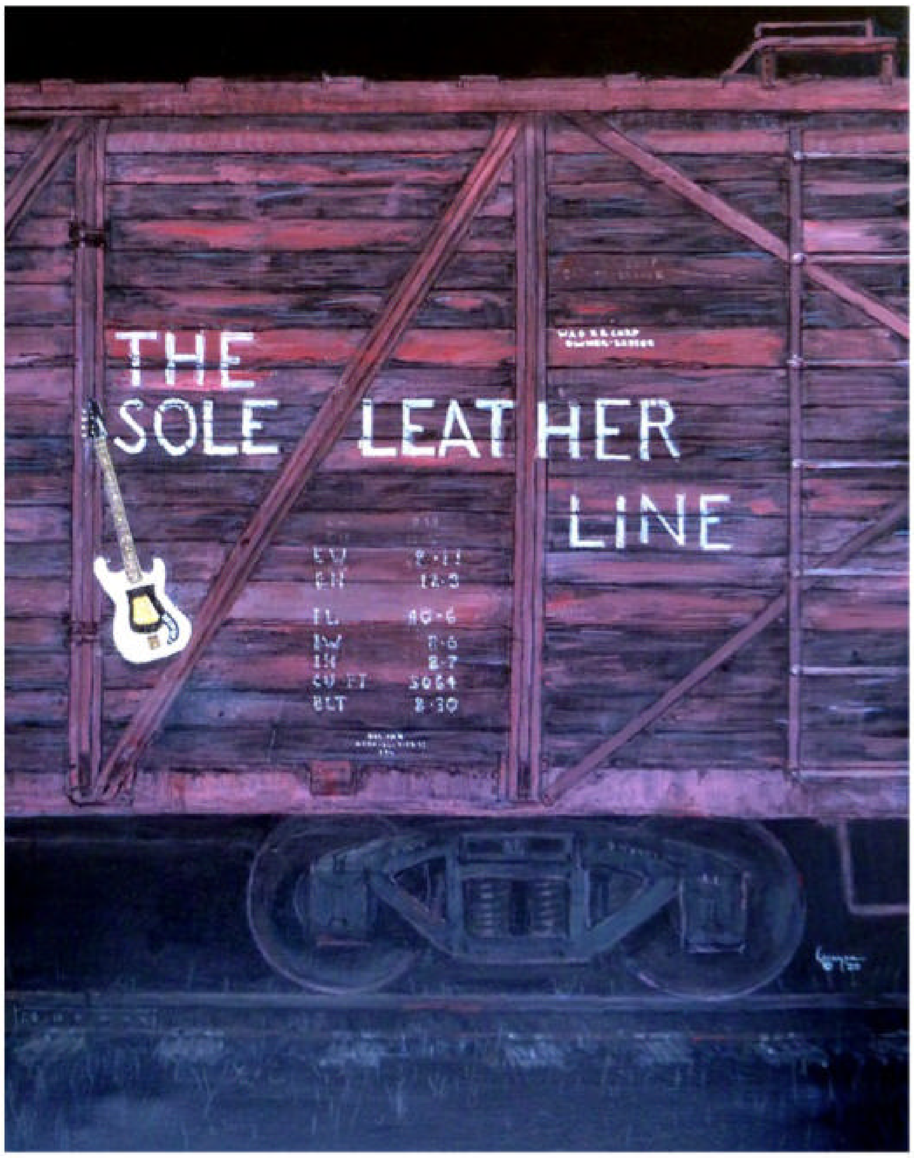
This letter granted the author permission to photograph on property. The boxcars were on Erie Lackawanna trackage.

It was all a blur...

Driving home from the local music store, a string of wooden boxcars caught my eye as I passed through the U.S. Route 46 underpass of the former Erie main line between Paterson and Passaic, N.J. For me this



Wayne Scarpaci, the author's friend, made this painting in a realistic style using acrylic paints. He produced this rendition of the Sole Leather Line wooden boxcar from a photo taken by John back in the '60s.

would be the first sighting of wooden cars, and not just one car, but a siding full of them: Cars with the catchy slogan "The Sole Leather Line" adorning their flanks.

What could that mean? Quickly doubling back and parking adjacent to the right-of-way of the Bay State Milling Co. — a rail-served company that handled flour and grain products since 1899 — it was time to explore. Not wanting to leave my first guitar in the car, I carried it over to these foreign-line freight cars.

Caught up in a moment of anything is possible, I propped up the guitar on the side of the boxcar. My mind was racing with thoughts of music deals, and the staged scene reminded me of an album cover. I even took off my leather-hide, fringed "hippie" jacket and added it to the shot.

Back on track

Later, I learned that the short line Wellsville, Addison, & Galeton Railroad served a remote area of north-central Pennsylvania. It was a hauler of green hides that also serviced a small Sinclair refinery and a scrap company. As the crow flies, it was 246.5 miles from where these cars were set out. There was no need for hides at Bay State Milling Co. The Sole Leather Line, as it was nicknamed, brought in so-called green hides to be used in the making of soles for shoes and work gloves.

Two customers, the Elk Leather Co. and the Eberle Tanning Co., provided most of the business for WA&G. The railroad deemed the best cars for hide hauling were these old wood-sided boxcars. Various examples of these cars were purchased from the Boston & Maine Railroad in 1958. The initial purchase was 78 cars which eventually accumulated to 761 cars.

Steel boxcars that were purchased from the Rock Island, Missouri Pacific and the U.S. Navy proved unsatisfactory in green-hide hauling. The steel on the cars corroded from the green hides, while the hideous odor emitted prevented the cars from being loaded with other commodities.

Outbound finished leather products did not cause an odor problem, however. Some of these steel boxcars were leased to Penn Central and carried Toledo & Ohio Central reporting marks. These were outbound loads via Buffalo, N.Y., and used in grain service.

All this ended in 1972, when retirement age caught up with these wood-sided, friction-bearing cars. Galeton, Pa., was the scrapping destination for many of them.

The WA&G's main source of revenue, the Elk Leather Co. in Elkland, burned down in 1973. A hurricane and subsequent flooding would add insult to injury along the Galeton-to-Elkland line in 1975.

If fire and weather didn't put a nail in the railroad's coffin, in 1976 the Eberle Tanning Co. suffered a massive explosion. In that incident, a third of the tannery was destroyed.

A petition to abandon the WA&G was filed in April 1976, and the ICC gave its approval March 1978. The Sole Leather Line's last revenue run was on March 13, 1979.

A 'soleful' discovery

During the COVID-19 pandemic there was plenty of time to clean out old desk drawers and become reacquainted with photos buried inside. The Sole Leather Line photos surfaced, allowing a long-lost look at the WA&G cars and that first guitar. Living through the '60s, I do remember not becoming a famous musician, as hard as we tried. Instead, our band, The 9th Edition, played lots of Sweet 16 parties and jam sessions. More modern times would find me playing bass in various church worship groups.

To this day I cannot remember (it was the '60s) what happened to that white bass guitar. Did I trade it, sell it, or lose it along the way? When I would share the story of the wooden cars and guitar, friends would laugh and reply, "Hey John, maybe you left your guitar on the train and it rolled away." That provided a few chuckles but no recollection to the mysterious disappearance of my bass guitar.

Years rolled by until the internet made searching for things more possible. Typing in "Hagstrom Bass" on the Reverb.com site, my guitar popped up. It was March 25, 2020. Black Rider Vintage Guitar in Lexington, Ky., had my bass for sale. The owner Mitch Rambo accepted my bid. His letter prior to shipping it was full of encouragement. It read, "No problem! It's a really nice one too, and nice to have something positive in these crazy times! Enjoy! I'll pack it well, it'll be on the road Friday, on its way back to you."

Knowing it was shipped and rolling across the country, it was time to track down the routes. Starting in Lexington, Ky., it was trucked to Louisville, resorted, then sent to St. Louis, Mo.

BNSF Railway took the UPS shipment from there to Tulsa, Okla., on to Amarillo, Texas. New Mexico towns Clovis and Belen were next followed by Winslow, Ariz., home of the famous and restored La Posada hotel and restaurant. The building at one time was the Santa Fe Railway headquarters. After a quick crew change at Winslow, the shipment would be on its way again rolling through Flagstaff and Kingman, Ariz. Needles, Barstow, and Los Angeles, Calif., would get the guitar into my state of California.

Opening the case and having that guitar back in my hands — the one my dad bought me 53 years earlier — was truly a once-in-a-lifetime experience.

I am so glad it rolled west, by rail, and I cleaned out that one messy desk drawer that day. I

Trailers on flatcars bring up the rear of a BNSF Railway freight train westbound stopped at Winslow, Ariz., for a crew change. This location is of the famous La Posada Hotel — former division offices of the Santa Fe Railway in the early 1960s.

R

S?

The cars that saved AMTRAK

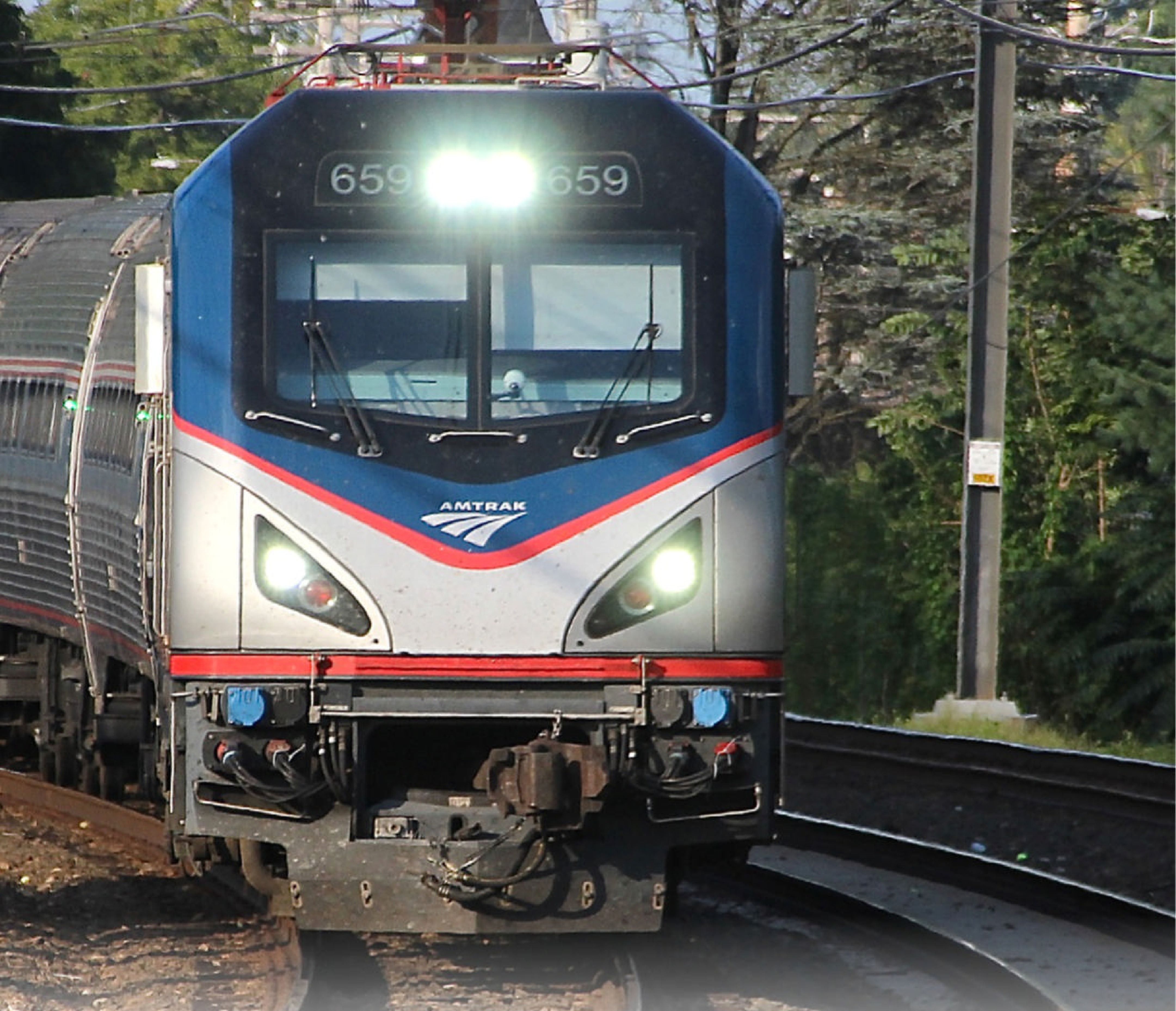
How Amfleet became Amtrak's "go anywhere, do anything" passenger cars

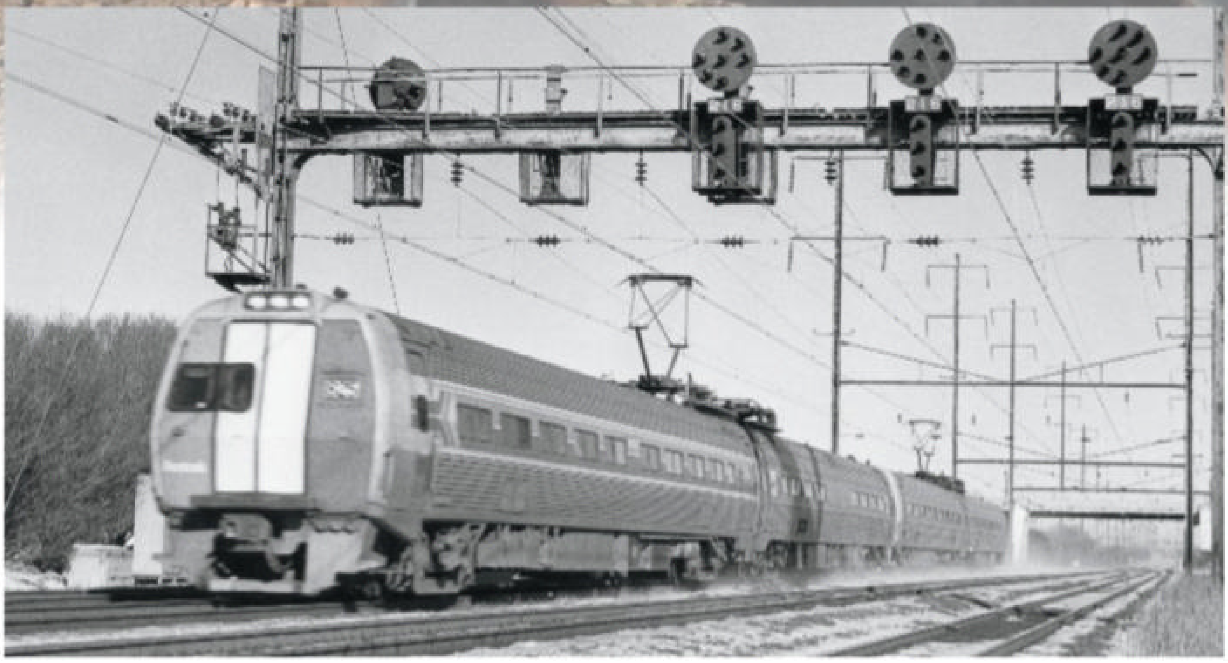
by John Friedmann

The *Abraham Lincoln* and the *State House,* suspended. The *Black Hawk,* the *Illini,* the *Blue Water Limited,* all suspended. The *Mountaineer* and the *Shenandoah,* suspended. The *Inter-American,* truncated. Even the *Floridian,* Amtrak's only way to Florida from the Midwest, was suspended.

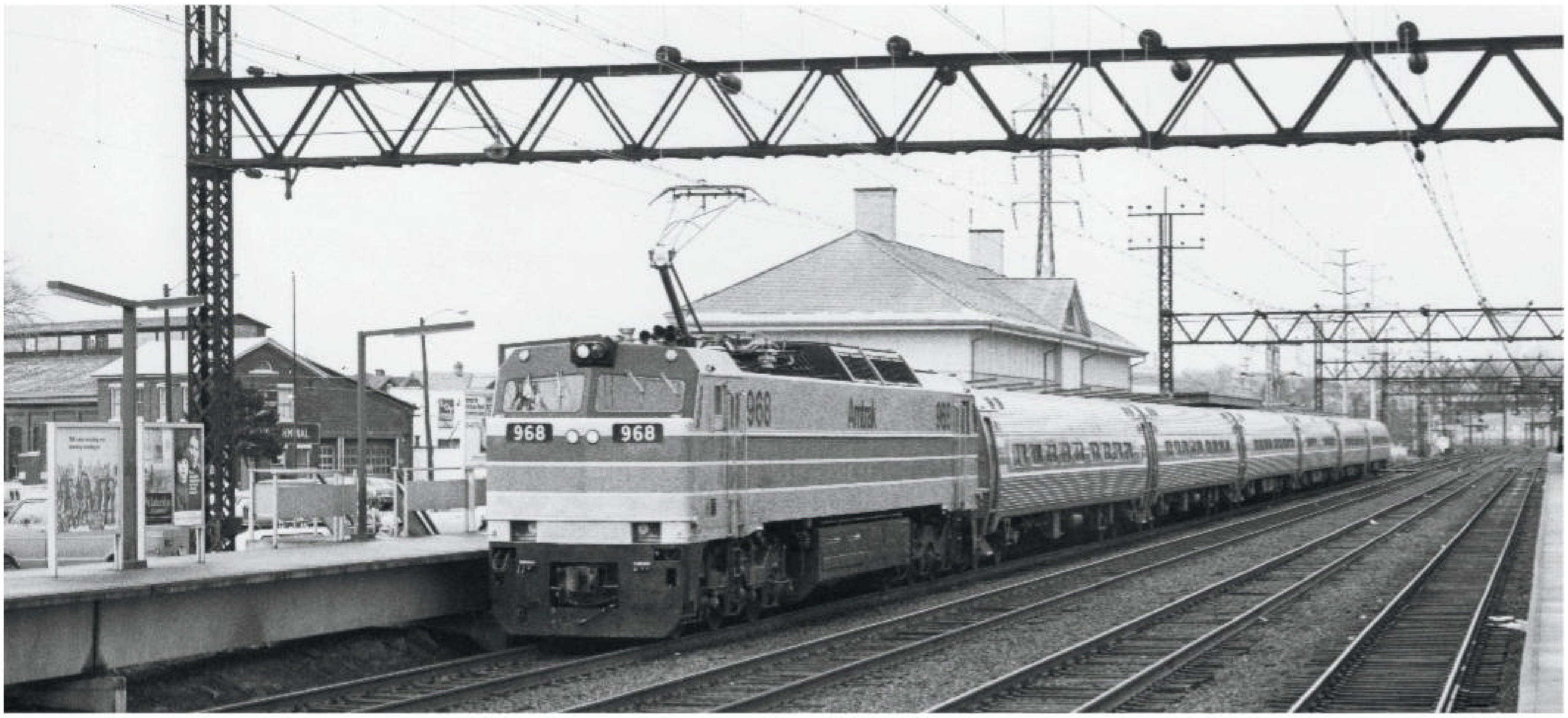
Tuesday, Jan. 18, 1977, was a dark day for Amtrak. The prolonged and bitter cold wave that sapped Amtrak's car and locomotive fleets had finally forced an orderly retreat, indefinitely suspending 20 daily trains. The train suspensions weren't the only casualties, as Amtrak resorted to daily annulments and "short turning" consists shy of their destinations to stretch its ailing fleet. Turboliners conked out on the road as fuel gelled from the cold. Even the flagship Metroliner service was subject to cancellation, as cold and snow felled the temperamental multiple-unit cars.

Amtrak's problems ran deeper than the weather. New EMD SDP40F diesel and GE E60 electric locomotives — Amtrak's first new motive power — showed a distressing proclivity to derail at speed and were restricted or banned. In the prior 60 days, seven mainline derailments involving Amtrak trains made the national passenger carrier's bad equipment situation even worse. The Ford Administration had been overtly hostile and proposed funding cuts. Even the bright spots — Amtrak's assumption of ownership of most of the Northeast Corridor and a key part of the Michigan Line in 1976 — required a better product.





Inset: The Amfleet design concept and the Northeast Corridor have been mated since the time of the Metroliners, seen here running through Colonia, N.J., Jan. 13, 1974. Main photo: Presently, 45-year-old Amfleet cars can be found on *Northeast Regional* trains behind new locomotives like No. 659, a Siemens ACS64, delivered in 2015. Main photo: David Lassen, Inset: John R. Taibi



Amtrak's Northeast schedules dated Feb. 15, 1976, advertised the Amfleet coaches, and included a new Northeast Corridor train No. 168, the *Bi-Centennial.* comprised of Amfleet cars and seen here in Stamford, Conn., on its inaugural trip with No. 968, a new GE E60CH electric. Henry E. Frick

But Amtrak had an unlikely hero — the company's brand new Amfleet cars. The Amfleet was a savior that enabled the company to survive the winter and come out the other side with optimism. Amtrak made a bet-the-company decision on Amfleet, ordering 492 cars that were based on the popular Metroliner design, but configured as traditional passenger cars instead of powered electric multiple-units. Amfleet started arriving in 1975, and by January 1977, 396 Amfleet cars were on the property.

During the January 1977 weather crisis, Amtrak instantly "Amfleeted" the Chicago-New Orleans *Panama Limited* and the Chicago-Washington, D.C., *James Whitcomb Riley.* This freed up badly needed older steam-heated equipment to keep other trains running. Amfleeting meant that the *Panama* and the *Riley* lost their sleepers and full diners, but without Amfleet, the trains wouldn't have run at all. Later in 1977, the Chicago-Laredo, Texas, *Inter-American* became the fourth long-distance train to be Amfleeted.

As expected, Amfleet performed well mechanically compared to both conventional steam-heated cars and Metroliners. During 1976-1977, conventional cars were out of service almost twice the rate of Amfleet, and Metroliners were unavailable almost three times the 10.8% Amfleet unavailability mark.

NEW EQUIPMENT FOR THE BUSIEST ROUTE

The Boston-Washington Northeast Corridor has always been the heart of Amtrak's network. During Amtrak's first five years, equipment on the NEC could be forward-looking (Metroliner M.U.s) or innovative (United Aircraft TurboTrains). But most passengers rode on hand-me-down equipment from Amtrak predeces-

AMFLEET TIMELINE

COUNTING THE ORIGINAL METROLINERS, the Amfleet story will span 64 years if the Amfleet I cars are retired in 2030. During this nearly 6½ decades of work, Amfleet cars have kept Amtrak running, helped inaugurate new services and suffered through horrific derailments. Yet they have stood the test of time, becoming a staple in the Amtrak roster.

May 6, 1966
First Metroliners ordered. ▼

Jan. 16, 1969 Metroliners enter revenue service on the Penn Central.

Oct. 12, 1973 Initial order of 57 "Metroliner shell" (Amfleet) cars.

June 19, 1975 Press viewing of Amfleet cars at Budd's Red Lion, Pa., plant.

Aug. 7, 1975 Amfleet cars enter revenue service in the Northeast Corridor. Power cars provided electricity before head-end power. ▼

Dec. 18, 1975 First Amfleet revenue service in the Midwest. ▼

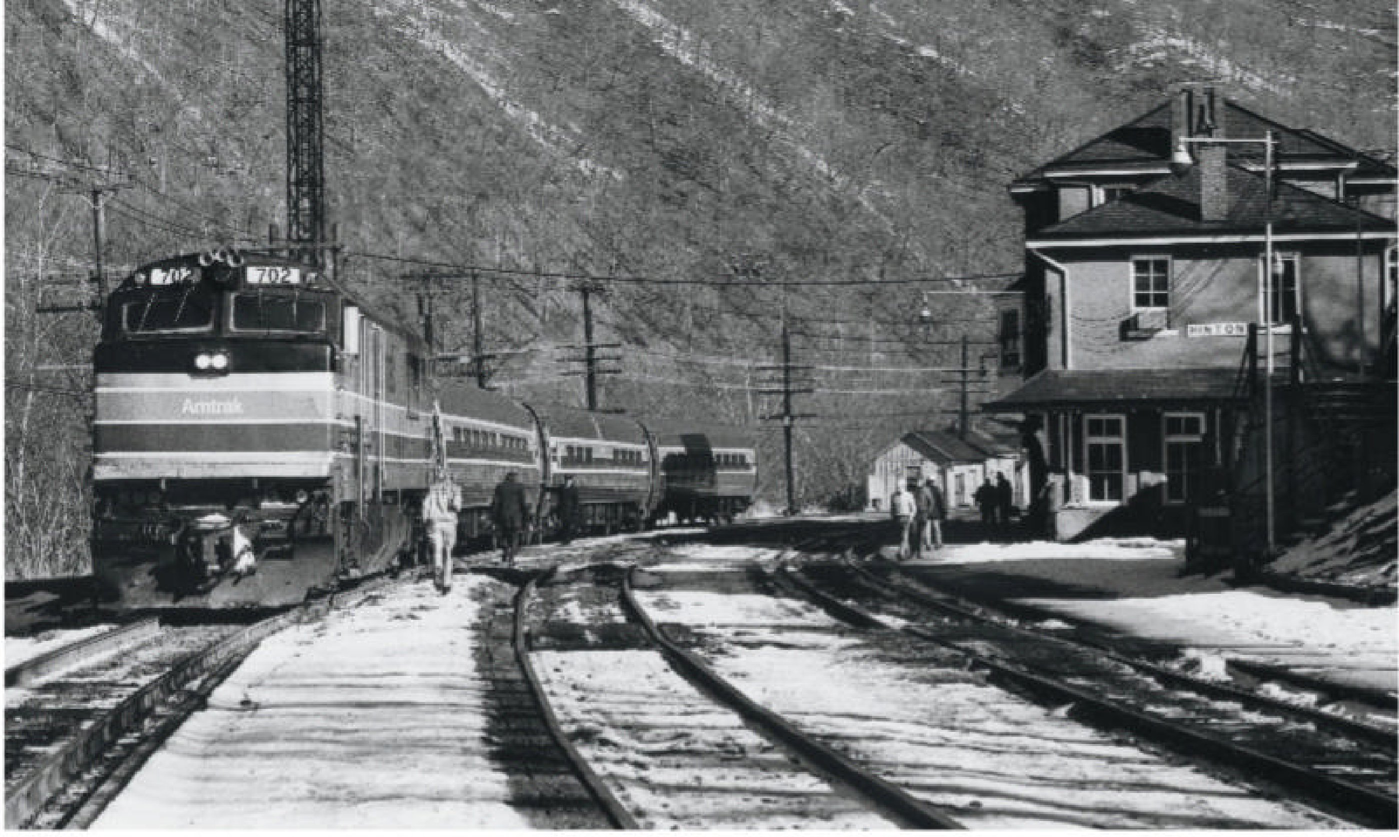
June 15, 1976 Amfleet enters long-distance service (New York-Savannah *Palmetto*). ▼

(Left to right, top to bottom): Lawrence S. Williams, Alex Mayes, Phillip E. Tygum, Alex Mayes sor roads, including a few ancient New Haven "American Flyer" cars (Pullman-Standard built in the 1930s) and prewar former Pennsylvania Railroad P70 coaches. The NEC's substandard equipment reflected the financial straits of Penn Central and its predecessors. If Amtrak were to thrive, it would have to improve its Northeast Corridor product.

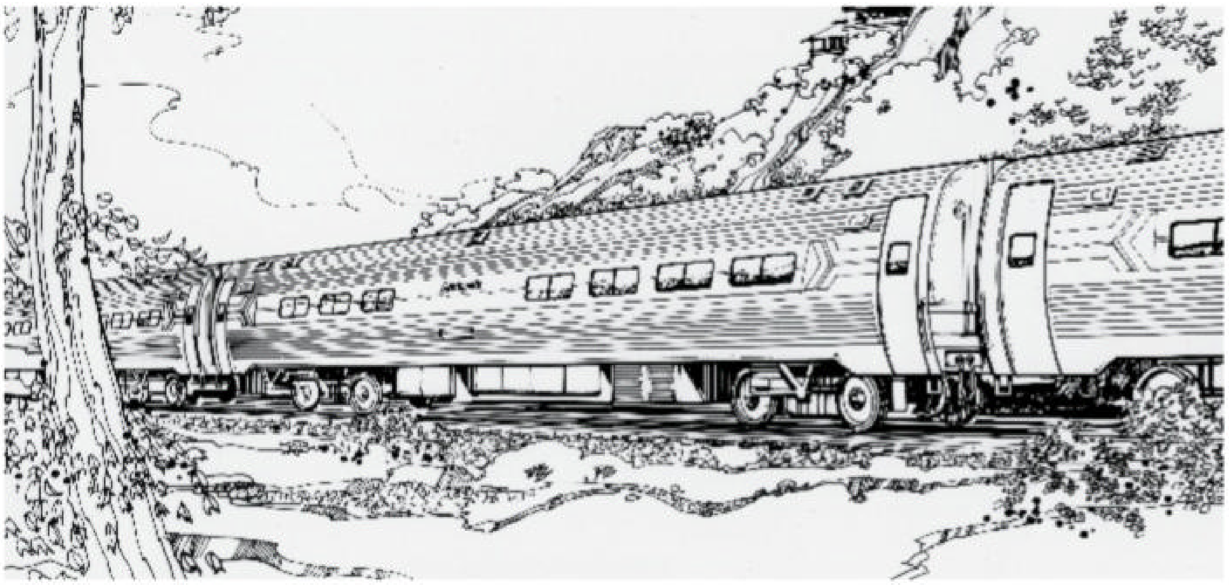
In late 1973, Amtrak took its first big step to reequip the NEC by ordering 57 "Metroliner shell" Amfleet passenger cars based on the popular Metroliner design but modified to be hauled by a locomotive. The Metroliners, which debuted in 1969, were hugely popular with passengers and demonstrated that modern equipment could draw passengers back to the rails. But the Metroliners were pioneers among U.S.-made high-speed trains, and unreliable systems would force their rebuilding only a decade after their debut.

Amfleet was born by Amtrak and Budd stripping the Metroliner car of its problematic propulsion systems, yielding a traditional non-powered passenger car that retained the Metroliner's tubular shape and its modern features. The cars came in two basic configurations — an 84-seat coach (Amcoach) and a food service car (Amcafe, Amdinette, or Amclub, depending on seating).

But Amfleet almost did not happen. Budd suffered substantial losses on the Metroliner contract, so it took Amtrak's promise of a large order to get Budd interested. Additionally, Budd proposed reusing the Metroliner tooling to keep costs down. According to Victor Hand, an analyst at Amtrak when Amfleet was ordered,



On a bitterly cold Jan. 30, 1977, in Hinton, W.Va., this three-car *James Whitcomb Riley* represents Amtrak's entire through service from Chicago to the East Coast. The cold knocked out the rest of Amtrak's eastbound trains. If not for the Amfleet cars, this train would be down too. Tim Zukas



Amtrak publicized its new Amfleet coaches saying: " … new stainless steel coaches capable of being pulled by either electric or diesel locomotives at speeds up to 120 mph are scheduled for delivery beginning this spring [1975] for service in the East and Midwest." Amtrak

June 7, 1977 Amtrak *Pioneer* is inaugurated with Amfleet equipment. ▼

June 9, 1977 Last of 492 Amfleet I cars delivered to Amtrak. ▼

March 13, 1980 Amfleet II order

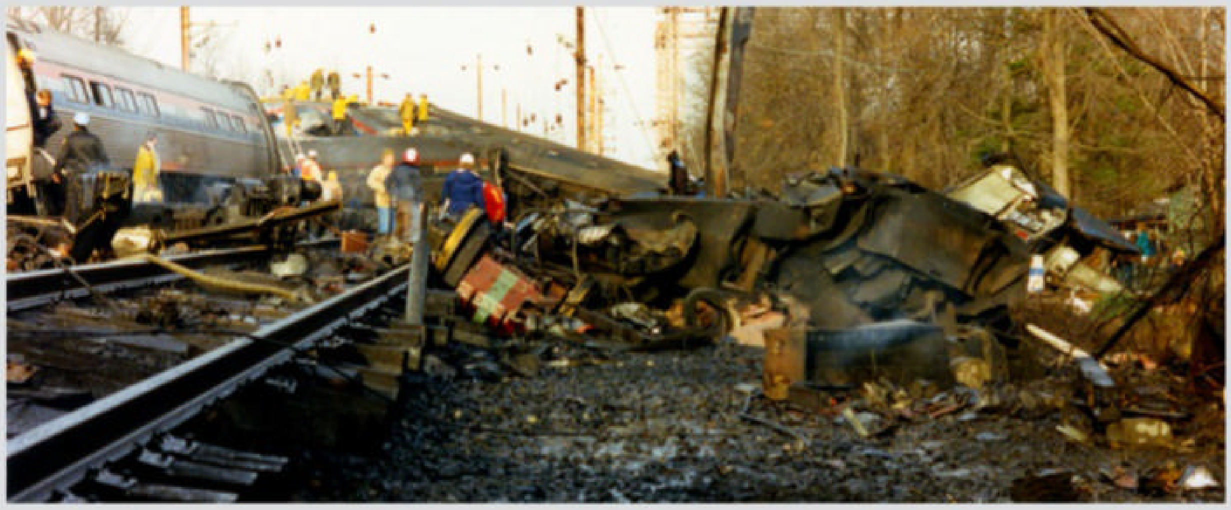
Oct. 28, 1981 First Amfleet II delivery

Jan. 4, 1987 "Ricky Gates" accident at Chase, Md., involving the Amfleet-equipped *Colonial*. ▼

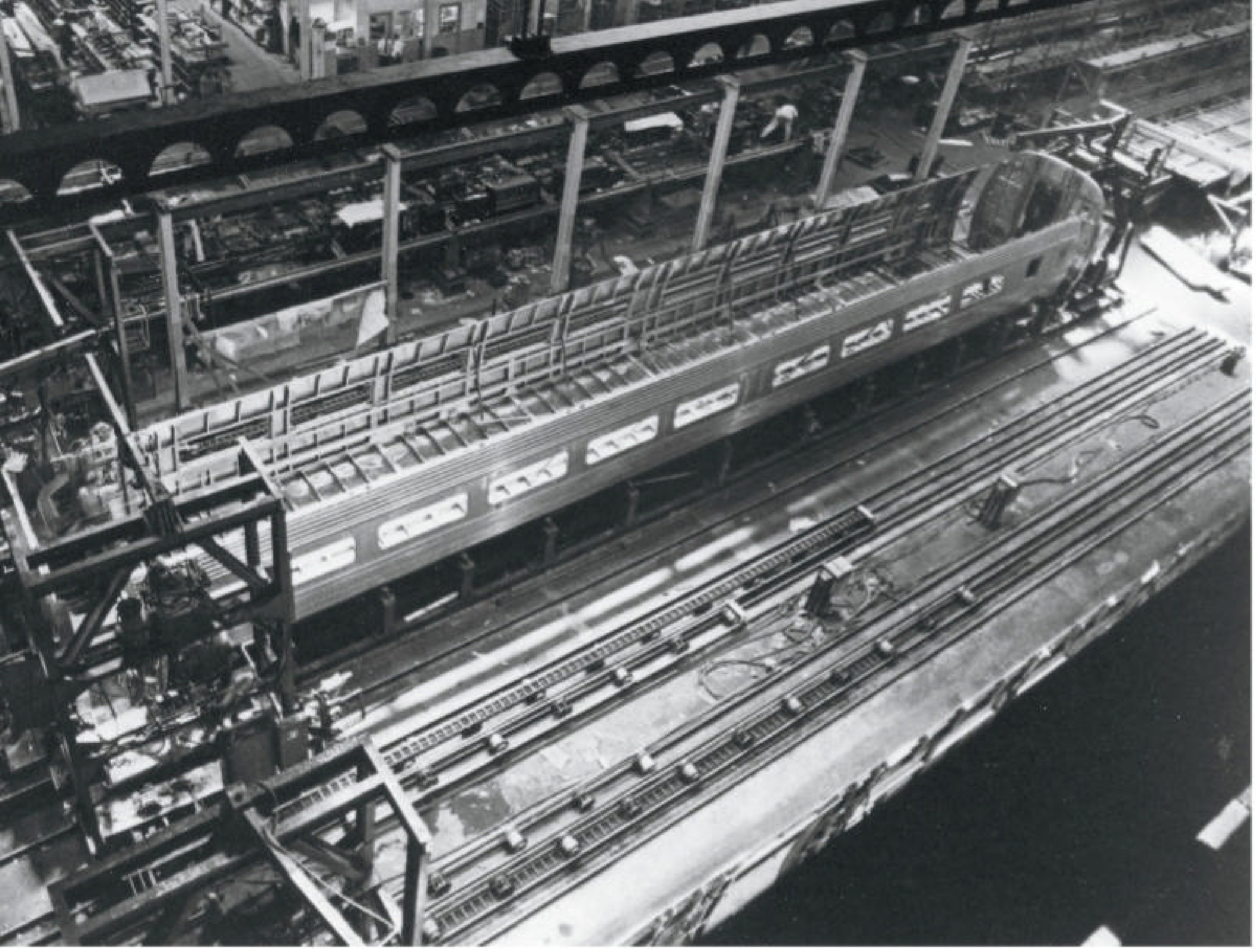
Jan. 18, 2019 Amtrak issues request for proposals for cars to replace Amfleet I.

May 2020 First Amfleet cars sold. They go to charter operator Railexco.

2030 Target date for full retirement of Amfleet I cars.



(Left to right, top to bottom): Wayne Depperman, *Trains* collection, Gary L. Sullivan



From the same factory that Budd used to produce stainless steel cars for the likes of the *California Zephyr,* Amtrak's new Amfleet cars are assembled in the erecting bays. In this August 1975 view, the car structure along with curved walls and ends is clearly visible. Budd Co.

Amtrak's marketing group wanted flat-sided cars with larger windows (and more baggage space), but Budd said this change would raise the price and delay delivery. "The lost revenue from the three-month delay in delivery was in the many millions of dollars, and it was decided to go with the round cars," says Hand. Aside from the Metroliners, Budd hadn't built a single-level intercity coach since 1961.

Amfleet was the confluence of three strategic fleet decisions:

- **Appealing.** The Metroliners were one of the few passenger success stories of the early 1970s, and Amtrak easily replicated the Metroliner's popular passenger amenities in Amfleet. Amtrak President Paul Reistrup cited an approximately 25% ridership increase from the introduction of new equipment like Amfleet.
- **Anywhere.** While Amfleet was initially targeted for the Northeast Corridor, the cars quickly became Amtrak's default short-haul workhorse. Amfleet can run anywhere on the Amtrak system and was even adapted to long-distance travel with the 150-car Amfleet II order of 1980. The decision to purchase individual cars (versus fixed consist of TurboTrains) meant that consists can be easily adjusted and cars redeployed where needed.
- **Accelerated.** Amtrak needed new cars quickly to replace worn-out and inconsistent hand-me-downs from previous operators, and Budd's use of existing tooling meant that Amfleet could be produced more quickly by Budd than by competing vendor Rohr Industries.

A fourth "A" — airplane-like — is just as important. Like airplanes, Amtrak opted for high-density, high-capacity vehicles, and minimized non-revenue space in the car designs to stretch the company's tight capital budget, even at the price of lower-quality food offerings.

"THE AMFLEET"

Amfleet's first miracle was how fast it was produced. Just 20 months elapsed between the initial order in October 1973 and the first deliveries in July 1975.

The Amfleet order was actually four separately financed transactions, starting with 57 cars in 1973, two separate orders totaling 235 cars in 1974, and 200 more cars ordered in 1975. Amtrak was so confident (or desperate) that all 492 Amfleet were ordered before the first cars were delivered. Amtrak also bought 150 more Amfleet cars ("Amfleet II," making the original cars "Amfleet I") for long-distance service in 1980.

HOW FAST WAS AMFLEET BUILT?

AMFLEET CARS WERE BUILT quickly compared to most other Amtrak orders. Here is time from order to first delivery.

Amfleet I	20 months
Superliner I	42 months
Horizon	11 months
(Produced as an add-on to an already in-production order of similar cars for New Jersey Transit.)	
Viewliner I	35 months
California cars	36 months
Next-Gen Bilevel	Not delivered
Venture	32 months

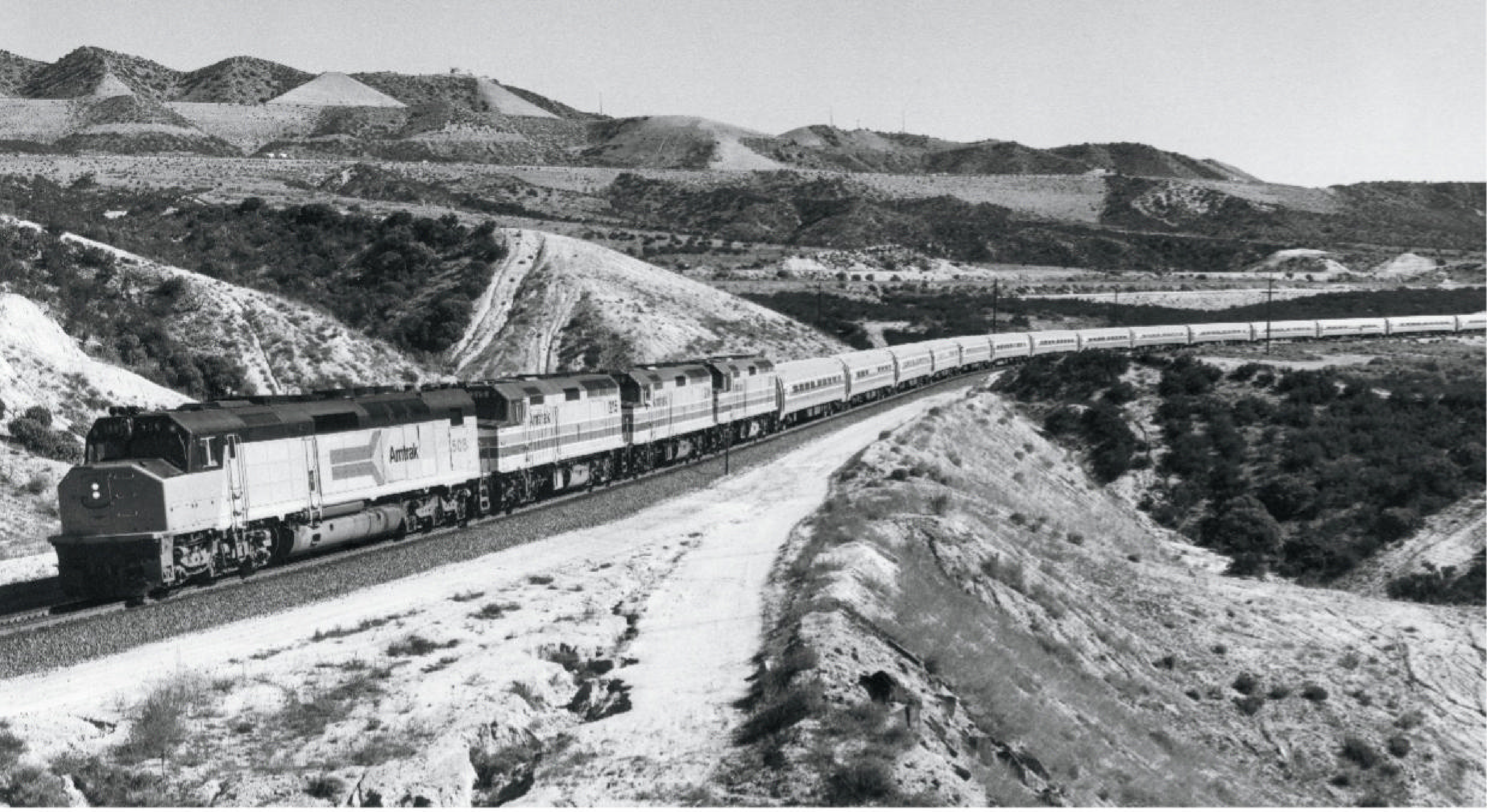
Taken as a whole, the Amfleet I order was 73% larger than the previous record-holding passenger car order placed with a single builder — the Chesapeake & Ohio Railway's 284-car order from Pullman-Standard in 1946. Unlike the C&O order, Amfleet was produced as planned and not diverted or canceled. By the time the C&O cars arrived in 1950, business had declined, whereas Amtrak needed the Amfleet cars to meet passenger demand. Budd kept producing Amfleet cars from initial order until the final Amfleet I car was delivered in 1977.

Since Amtrak got very little federal capital support in the early part of its life, Amtrak creatively financed Amfleet's $200 million price tag. Amtrak borrowed money at very attractive rates (under 5% during the inflationary 1970s) using federal loan guarantees and a sale-lease-back structure designed to generate favorable federal tax treatment for its lenders. Without these tricks, Amtrak would have waited years more for direct federal appropriations to purchase new cars.

DELIVERY AND CELEBRATION

Amtrak declared 1975 the "Year of the Amfleet." To introduce the new cars, Amtrak and Budd hosted a press tour through Budd's Red Lion, Pa., plant in June 1975. This event marked the public debut of the term "Amfleet," an ad agency creation that finally buried the awkward "Metroliner shell" moniker. Cars soon showed up on the property and were displayed at stations along the Northeast Corridor for public viewing and familiarization by maintenance forces. Amtrak ran an Amfleet employee special on Aug. 3, and the cars entered revenue service from Washington to Boston four days later. By the end of 1975, 115 new Amfleet cars were on hand, and Budd was producing nearly one car per day.

Amfleet first replaced hand-me-downs on non-Metroliner trains in the Northeast Corridor. By Christmas 1975, Amfleet supplemented Turboliners on corridor runs out of Chicago. Out west, Los Angeles-San Diego converted to Amfleet in late spring 1976. The inauguration of the New York-Savannah, Ga., *Palmetto* in June 1976 was Amfleet's first long-distance assignment. The *Palmetto* marked the first use of the cars south of Virginia and the longest run — 828 miles — scheduled to date for the new cars.



On April 30, 1976, EMD SDP40F No. 508 leads three new F40s and 18 Amfleet cars down Cajon Pass. The equipment is for Los Angeles-San Diego service. Steve Patterson

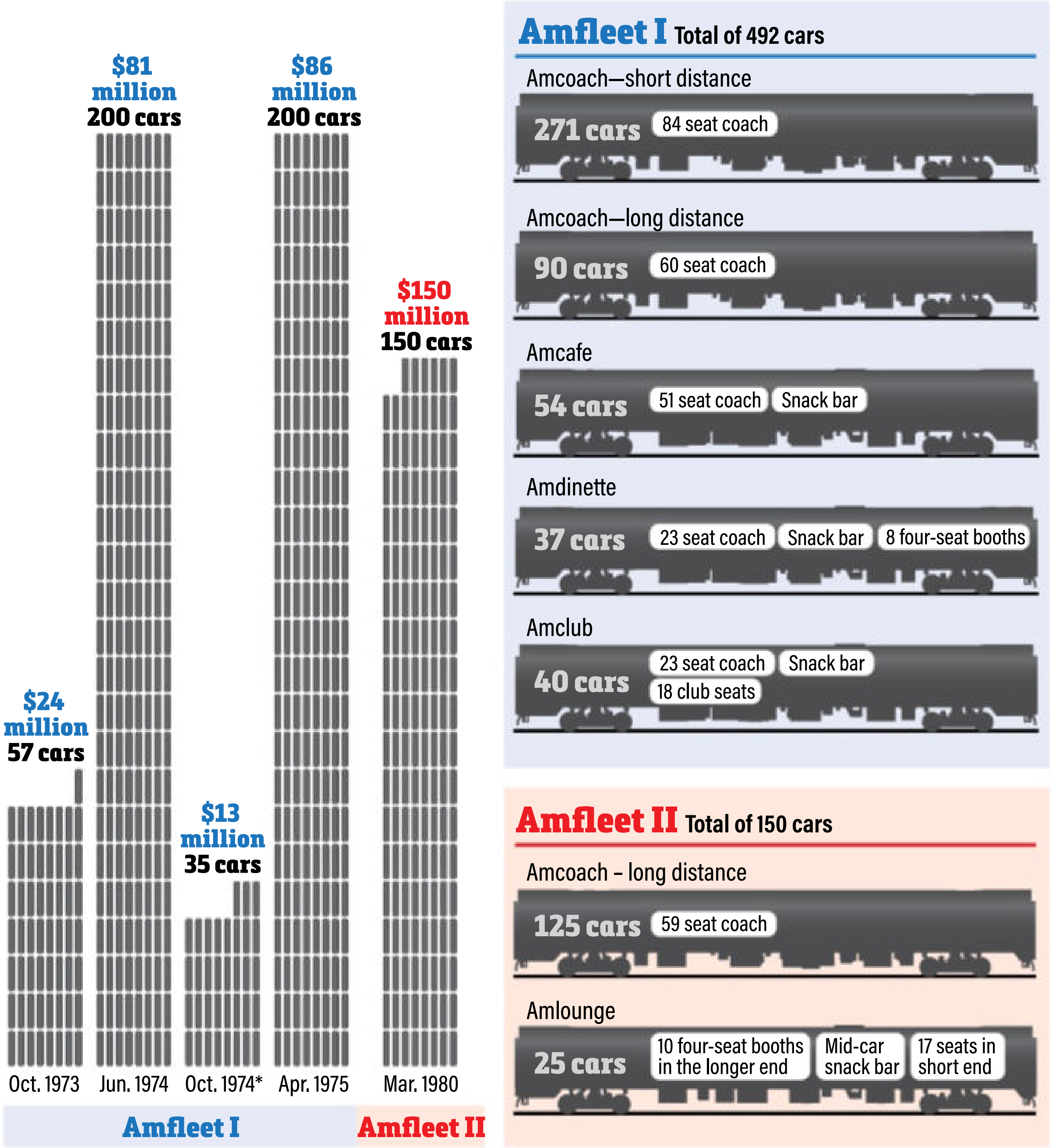
Despite the awful winter, full delivery of Amfleet in 1977 enabled the carrier to inaugurate two new trains and one replacement, all with Amfleet. The Seattle-Salt Lake City *Pioneer* used Amfleet equipment despite its lengthy 1,081-mile route, enabling the train's inaugural 46 months before receiving Superliners.

AMFLEET, PRO AND CON

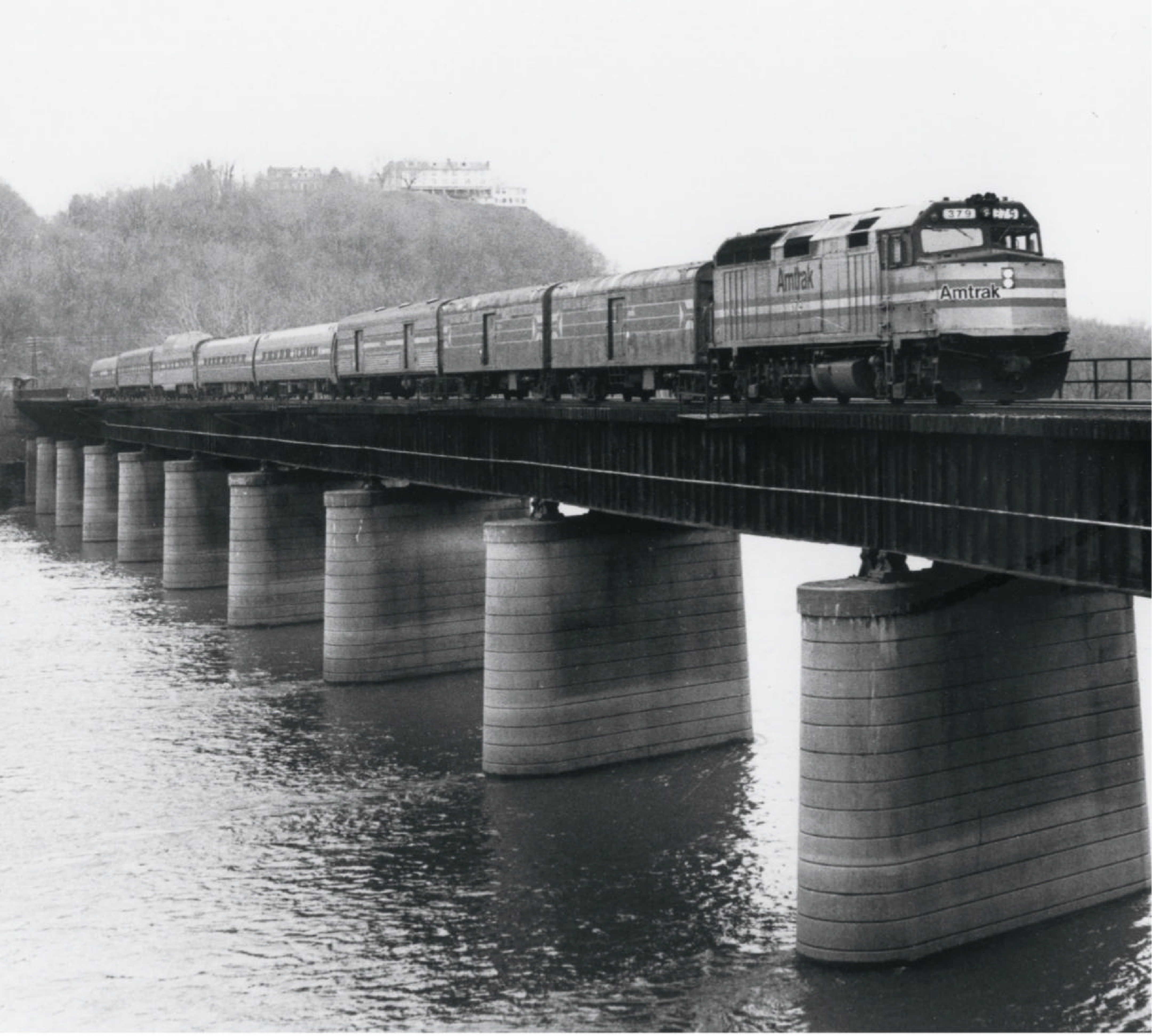
Amtrak desperately needed Amfleet to be successful. In its first four years, the passenger carrier established a dismal

Plying the same rails once used by the *City of Portland* streamliner, the all-Amfleet *Pioneer* departs Portland, Ore., on May 31, 1978. Wayne Depperman

HOW THE AMFLEET WAS BUILT



* Ordered as a substitute for seven 5-car Turboliner sets that were rejected by DOT.



A significant plus for Amfleet equipment is that it worked with Amtrak's other cars. On Nov. 9, 1985, the *Capital Limited,* No. 440, crosses the Potomac River as it leaves Harpers Ferry, W.Va., with a combination of Heritage and Amfleet equipment. Alex Mayes

HOW AMFLEET SET STANDARDS

AMFLEET DIDN'T PIONEER brand-new technology (arguably one reason for its success), but the technologies and configurations it adopted became standards in future Amtrak car orders:

- 480-volt head-end power (in place of steam heat and axle-driven generators)
- Retention toilets
- Segmented (multi-piece) windows
- Air push doors (including foot-activated "kick pads")
- Outside brake condition lights

Other innovations were directly traceable to airplanes:

- Individual adjustable reading lights
- Seat-back, fold-down tray tables
- High seat backs and indirect lighting
- Seat-back pockets
- Tracked seating, allowing for easy interior reconfiguration

Not all airplane features were successful. Amfleet cars were delivered with center armrests between coach seats. These proved unpopular and were removed early on.

equipment procurement track record. Amtrak's 150 EMD SDP40Fs were programmed as E- and F-unit successors. They had derailment problems and were soon banned or speed-limited by most Amtrak hosts. GG1 replacements in the form of 26 boxy GE E60 electrics also showed tracking problems and were almost immediately limited to 85 mph maximum speed. Amtrak's primary new equipment prior to Amfleet was the French RTG Turboliners used in the Midwest. The Turboliners were

Welcome into the cab of AEM7 electric No. 900. We are leading Amtrak train No. 102 along the Northeast Corridor at 100 mph. Another Northeast Region train is about to blow by at nearly the same speed. This is one purpose for which the Amfleet car were specifically designed. Fred W. Frailey

Although Amfleet cars travel along scenic routes, as here through Rocky Neck State Park in Connecticut, their limited window size makes viewing difficult. Bob Johnston

a modest initial success, but their inflexible fixed consists and high fuel costs shortened their Amtrak careers.

Amfleet avoided the flaws of prior equipment orders. The cars, based on the proven Metroliner design, are mechanically simpler since they are pulled by locomotives. Importantly, Amfleet is flexible, being equally usable on the Northeast Corridor or through the mountains of Oregon. The cars fit everywhere on the system and can run in any length consist intermixed with Heritage fleet (after HEP conversion), Horizon cars, and Viewliners.

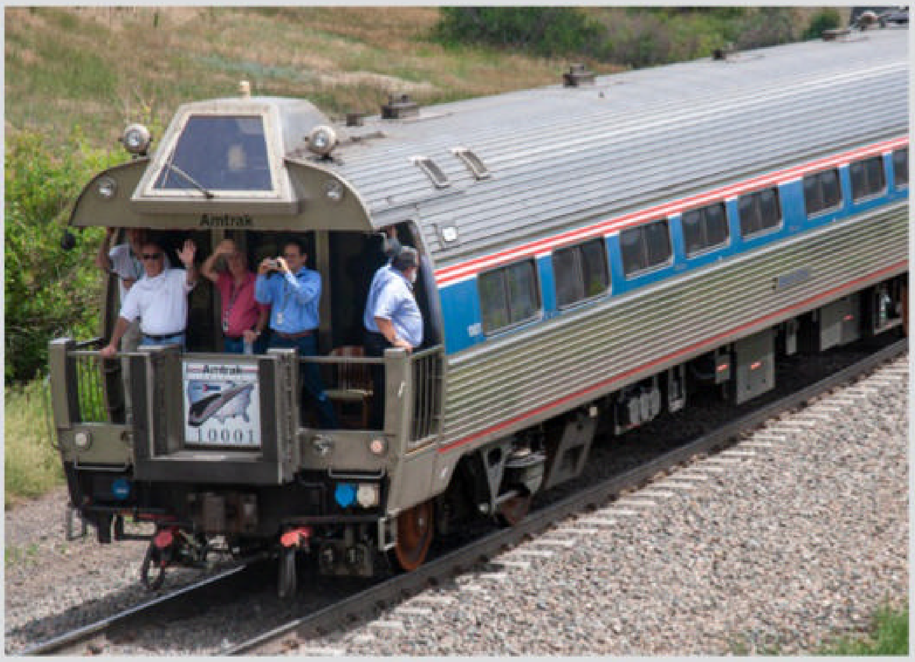
Railfans can be the biggest Amfleet naysayers. On the outside, the cars' tubular look, ubiquity, and uniformity turn away photographers. Even a 100% Amfleet train never seems to match whatever pulls it. Inside, high seatbacks and small tinted windows make it hard to see out, and railfans mourn the loss of streamliner amenities like full diners and generous lounges even as they appreciate consistent air conditioning and functional plumbing.

Perceptions aside, Amfleet isn't without its failings. Snow accumulates excessively in vestibules, and the steep steps down to low-level platforms are difficult for passengers with luggage or mobility issues. Both the folding vestibule steps and exterior door pockets present maintenance issues and are problematic with ice and snow. Passengers and crews miss the Dutch doors of conventional equipment, a fault addressed by a sliding vestibule window in Amfleet II.

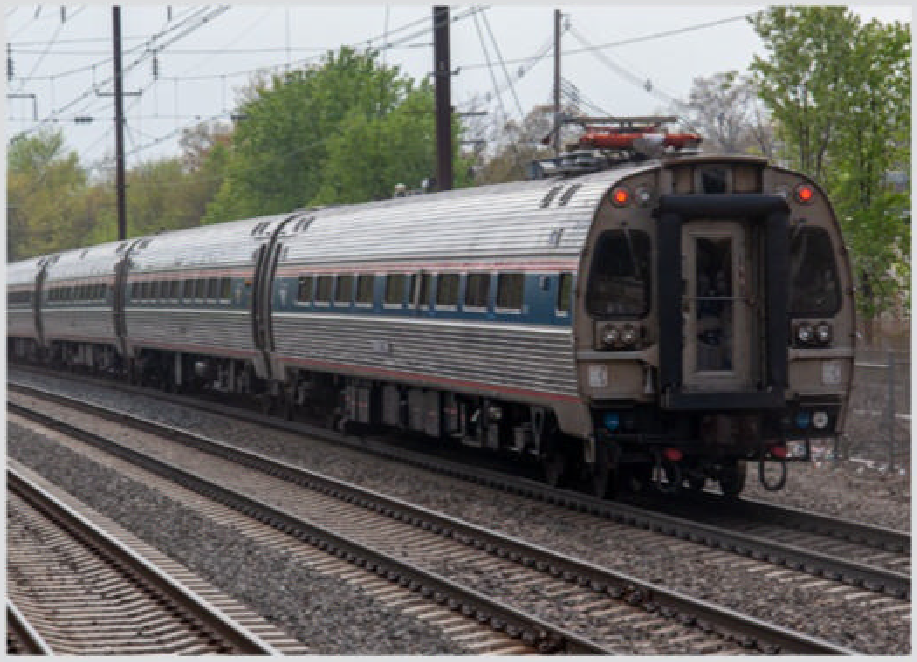
AMFLEET TO THE RESCUE, AGAIN AND AGAIN

By 1978, Amtrak's Metroliners were showing their age and were sent off for rebuilding. Locomotive-hauled Amfleet trains began to cover the Metroliner schedules and AEM7 electric locomotive/Amfleet consists completely supplanted the original M.U. cars by 1982. Amfleet cars were able to uphold the Metroliner brand (even posting less-than-3-hour schedules when required) until the late 2000 debut of the high-speed Acela trainsets. But when systemic mechanical issues sidelined the Acelas in 2002 (cracked yaw dampers) and again in 2005 (brake disc cracks), Amfleet equipment filled in to maintain service.

SIX UNIQUE AMFLEET CARS



Amtrak No. 10001, *Beech Grove*, has all the accommodations of a traditional business car built into the body of an Amfleet coach. The car also carries measuring equipment for track inspections. *Trains* collection



Fabricated from a wrecked Amfleet coach, the *Corridor Clipper*, seen here on April 17, 2013, along the Northeast Corridor, is Amtrak's track geometry and catenary inspection car. *Trains* collection

10001 *Beech Grove*

Converted in 1984 from Amcoach 21222, *Beech Grove* is the closest thing Amtrak has to a traditional business car, with open platform, lounge, kitchen, dining area, and sleeping area. This car is used by Amtrak managers and is often found on inaugural or other special-event trains.

10002 *Corridor Clipper*

Recognizable as the only Amfleet car with a pantograph, the heavily instrumented *Corridor Clipper* measures track geometry, primarily on the Northeast Corridor. It was converted from coach 21191 in 1985.

21128

This otherwise unremarkable 84-seat Amcoach was retrofitted to test a Budd-designed tilt system in 1982. The system was engineered to allow faster speeds on NEC curves. While the test results were positive, the tilt system was never implemented.

22900–22901

Nicknamed "Ampads," two long-distance Amcoaches each had two Economy bedrooms added in 1978 in place of 12 coach seats. The cars were used for 18 months on the lightly patronized *Shenandoah,* a Washington D.C.-Cincinnati overnight train discontinued in 1981. By then, the cars had been returned to their all-coach configuration.

85999

Formerly Amclub 20130, this Amfleet car served as the souvenir car on Amtrak's 40th anniversary train in 2011.

278 278
Amtrak

The Amfleet gave Amtrak greater economic flexibility when it was backed into adding marginal trains like the *Hilltopper,* seen here at Crewe, Va. on Oct. 8, 1978. The train was a pet project of West Virginia Sen. Robert Byrd. The *Hilltopper* ran from June 1977 to October 1979. Mike Small

Ironically, Amfleet was ordered to replace Metroliners from the outset, but that plan was delayed by the speed restrictions on the E60 electrics that made it impossible to uphold Metroliner schedules. The arrival of AEM7 electrics in 1980 finally allowed for the conversion of Metroliners to Amfleet.

Amfleet also filled in when deliveries of new Superliner cars from Pullman-Standard were delayed. In addition to the *Pioneer,* which was Amfleet-equipped at its debut in 1977, the *Desert Wind* (Ogden, Utah-Los Angeles) began life in 1979 as an Amfleet train despite its 811-mile route.

OPENING DOORS WITH AMFLEET

Amfleet didn't just save Amtrak when other equipment malfunctioned — the cars enabled Amtrak to expand whether it wanted to or not. Amtrak's *San Diegan* service is the best example of this "Amfleet effect." The Los Angeles-San Diego corridor saw only six trains per day pre-Amfleet, but new Amfleet equipment grew

Midwest trains, like this *Lincoln Service* train in Willow Springs, Ill., on July 16, 2022, are Amfleet strongholds. Running on regional trains to Detroit, Milwaukee, St. Louis, and smaller towns, their days are numbered as Amtrak introduces the new Siemens Venture cars. David Lassen

patronage 75% in one year and drove Amtrak to double service within two years. Now the corridor, expanded north of Los Angeles and rebranded the *Pacific Surfliner,* sees 28 train starts per day. An 11-year Amfleet run on the central California *San Joaquin* route helped that service survive budget cuts and grow, and spawned the associated Capitol Corridor. The impetus provided by the then new-Amfleet is undeniable even long after Amfleet's replacement in the California corridors by state-supported double-decker equipment.

Amtrak may have been less enthusiastic about other expansions. Sen. Robert Byrd, U.S. Senate majority leader from West Virginia, championed the short-lived, home-state *Hilltopper.* It was fresh stainless-steel Amfleet equipment that allowed Amtrak to add such "shiny new trains" when demanded, even if those trains were only one locomotive and two cars. Amfleet was the equipment that showed the public and politicians what modern, reliable passenger trains looked like and helped generate ridership gains that led to more service.

THE FUTURE

Of the 492 Amfleet I cars, 478, or 97%, remained on the roster as of October 2021, serving as corridor workhorses with more than 45 years of service. The cars have likely seen their last rebuilding, with Amtrak's latest Service and Asset Line Plans calling for Amfleet I's full retirement by 2030. Amtrak has already sidelined some Amfleet cars, which are unlikely to see service again.

To give a sense of Amfleet's longevity, consider that some Amtrak trains have been Amfleet-equipped since their inaugural more than three decades ago. Amtrak's *Palmetto* (inaugurated in 1976, albeit with gaps), *Pennsylvanian* (1980), and *Carolinian* (1990) have used Amfleet equipment since being launched. The Amcoaches from the 1976 inaugural *Palmetto* have a chance of being in the consist today, 46 years later.

The Siemens Venture cars, adapted from European designs, will send Amfleet to the scrapyard. Midwest states took the lead in ordering a total of 107 Siemens Venture cars, which will displace Amfleet and other Amtrak equipment on short-haul corridors in Illinois, Indiana, Michigan, Missouri, and Wisconsin. The first Venture cars went into service out of Chicago during early 2022 and the rest will be delivered over the next two years. In 2021, Amtrak ordered 73 Venture trainsets from Siemens with options for more than 100 additional trainsets. These trainsets will finally displace Amfleet from its *Northeast Regional* stronghold.

The Venture cars address many Amfleet flaws by providing larger windows and an airy and accessible car interior. But Amtrak's Venture trainsets explicitly reject some of Amfleet's flexibility in a bid for operational efficiency. The trainsets will be assembled in fixed six- or eight-car configurations, specifically designed to eliminate Washington locomotive-change delays and the need for Empire Service trains to use third rail to reach New York's Penn Station. This means Venture equipment is explicitly tailored for specific routes, and it would be unlikely to see a New York *Empire Service* Venture trainset in Washington, much less Chicago-based Venture cars anywhere on the NEC. Harkening back to the Metroliners, Amtrak's Northeastern Venture trainsets will have cab cars, and some will have pantographs and supplemental traction motors — adding efficiency, but also increasing complexity.

Amfleet is the Swiss army knife of passenger equipment. It is able to do almost any job, but it is not the optimum alternative for every job. Amfleet should remain unique in the United States as a massive passenger equipment order, delivered quickly and used everywhere in the country. I

JOHN FRIEDMANN *is a retired railroad manager living in Atlanta. He grew up preferring the then-new Amfleet to the spartan commuter equipment in his native Northeast. This is his first* Trains *byline.*

TROUBLE ON T

SCHNEIDER
SWIFT
INTERMODAL

...AND BEYOND

HE TRANSCON

Crew shortages create bottlenecks, delay freight on BNSF, CSX, NS, and UP

Story and photos
by Bill Stephens

6093
6093
BNSF

Intermodal trains meet on BNSF's Gallup Subdivision at Dalies, N.M., on Oct. 20, 2018. BNSF had the most pronounced service issues in mid-2022, embargoing some traffic to California and struggling to recrew trains. Chip Savoye

A crewman climbs down from an eastbound intermodal train at Needles, Calif, on Aug. 9, 2022. The train, Q-LCACATG6, would have a fresh crew and roll out of town in just 10 minutes, reflecting BNSF's ability to keep its hottest trains moving while other service struggled.

IN JUNE, MORE THAN 20% OF BNSF'S TRAINS IN CALIFORNIA, ARIZONA, AND NEW MEXICO WENT DEAD ON THE FEDERAL 12 HOURS OF SERVICE LAW

In August, Trains *drove alongside BNSF Railway's Southern Transcon from Barstow, Calif., to Belen, N.M., to see how North America's busiest freight railroad and intermodal corridor was faring amid the historic crew shortages that have affected operations on BNSF, CSX, Norfolk Southern, and Union Pacific. BNSF's California and Southwest divisions — normally models of efficient operations — were the country's hardest hit, based on their recrew rates and the railroad's embargo on certain types of carload traffic bound for the Golden State.*

Amid crew shortages and a supply chain with almost as many kinks as links, BNSF Railway's Southern Transcon across the Southwest became two railroads wrapped up in one.

The first railroad you already know: It's the intermodal artery that carries a fleet of priority Z-symbol hotshots and Q-symbol guaranteed-service stack trains. From trackside they seemed to be relatively immune to the railroad's operational problems. While approaching Winslow, Ariz., on Interstate 40, you look across the sagebrush and glimpse eastbound and westbound intermodal trains rolling along at track speed, closing in on each other at a combined 140 mph. The Z and Q crew changes were snappy, with fresh crews at the ready and highballing the trains out of town, often within 10 minutes or less.

The second railroad wasn't moving well — and sometimes wasn't moving at all. In old passing sidings from Barstow to Belen sat woebegone merchandise and international S-symbol stack trains. Some were stripped of their locomotives and parked for days, or even a week or more. Lower-priority international intermodal, merchandise, and bulk trains also tended to congregate in and around terminals when rested crews were not available to take them on the next leg of their trips across the former Santa Fe main line.

The merchandise trains were tied down because scarce crews were being allocated to service-sensitive intermodal trains, a practice the other railroads have followed, too. BNSF's unusual embargo on certain types of carload traffic bound for California, which ran from June 27 through Sept. 4, also played a role as the railroad worked off a backlog of traffic in Southern California.

The eastbound international stack trains, carrying containers imported through the ports of Los Angeles and Long Beach, were in a holding pattern. They awaited space at clogged intermodal terminals in Chicago, Memphis, Kansas City, and Fort Worth.

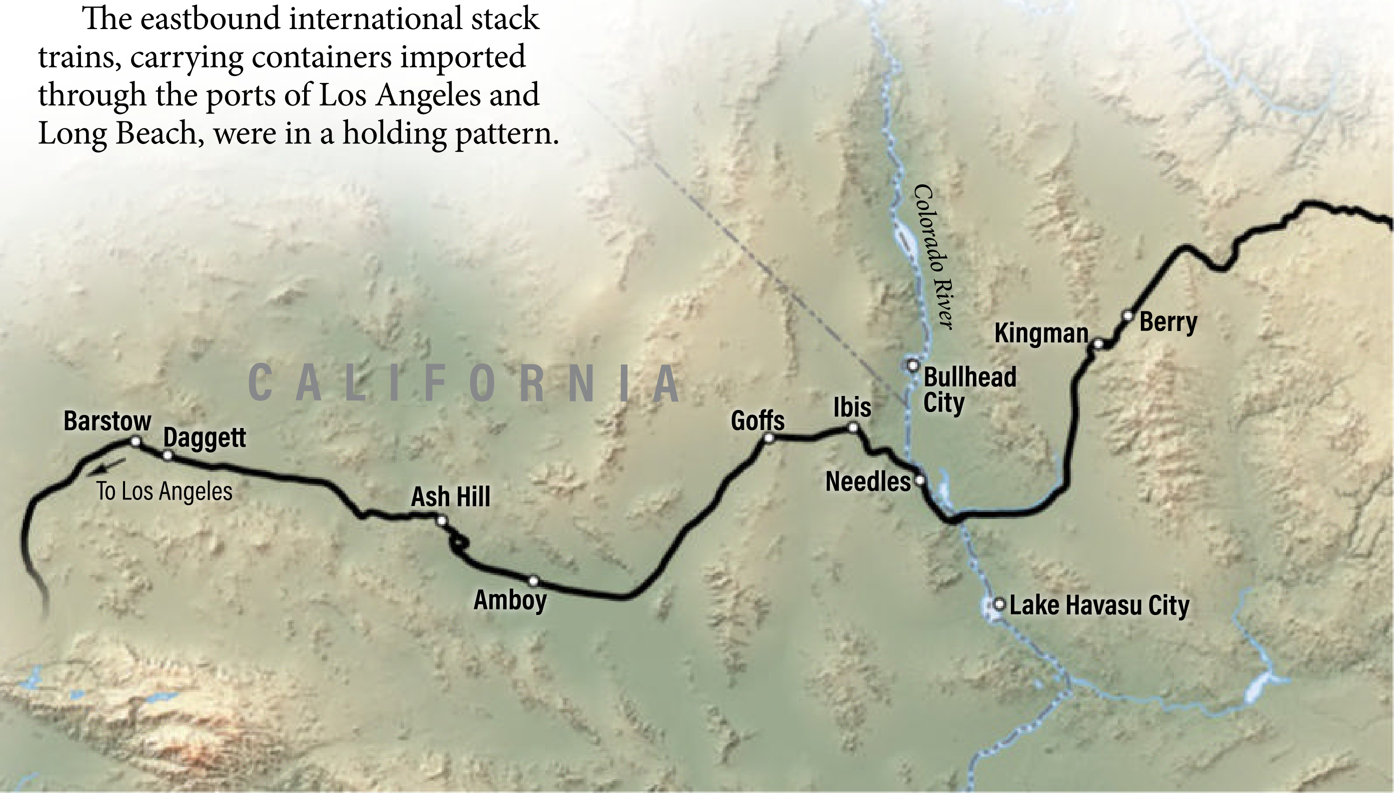
Simply put, supply chain problems beyond BNSF's control meant that volume was coming into the ports faster than cargo owners were picking up their freight at inland terminals. So those S-symbol trains — more than two dozen scattered between California and Chicago — were marooned until they could leapfrog closer to their destinations. As the No. 1 international intermodal carrier by volume, BNSF has been far more affected by this phenomenon than the other railroads.

Meanwhile, Mother Nature wasn't doing BNSF any favors. The Southwest's monsoon season brings near-daily thunderstorms and heavy downpours accompanied by gusty winds. The storms can bring the railroad to a temporary halt as warnings are hoisted for high winds and flash floods. Then, when the warnings come down, BNSF gets back to business and launches a torrent of trains.

The congestion — related to crew shortages, supply chain problems, and bad weather — prompted a fourfold spike in recrews. At its peak in June, more than 20% of BNSF's trains in California, Arizona, and New Mexico went dead on the federal 12 hours of service law and had to be tied down en route, chewing up more capacity and exacerbating crew shortages.

This was not BNSF's finest hour. But it's far from alone in the doghouse with shippers and regulators. CSX Transportation, Norfolk Southern, and Union Pacific found themselves in the same fix. They've been caught short of train crews, too.

The railroads say they've had to turn away freight and have lost traffic to trucks as on-time performance faltered. Had it been fluid, UP would have expected 4% volume growth in the second quarter. Instead, traffic was down 1%, partly due to metering of some carload volume as a way to reduce congestion.



Awaiting a crew, CSX Transportation train M424 (Selkirk, N.Y.-West Springfield, Mass.) sits on Track 2 at Westfield, Mass., 7 miles short of its destination, on Aug. 22, 2022. The M424 was frequently tied down in Westfield for several days at a time from August through mid-October.

The problem goes back to the onset of the pandemic in 2020, when Class I railroads furloughed crews as volume sank at the fastest rate on record. When traffic rebounded within a few months, crew members were not called back to work at the same rate that volume returned. With railroads moving their tonnage on fewer but longer trains, they thought they didn't need as many engineers and conductors.

Then three things happened that put railroads in a bind. Furloughed conductors found work elsewhere and didn't come back to the railroads at the same rate as they had in the past. Train and engine crews quit or retired at higher rates than usual in many terminals. And the tightest job market in decades made it difficult to hire new conductors.

This produced the worst service crisis since the megamergers of the late 1990s. The unprecedented widespread crew shortages at key terminals on all four systems made one thing clear: If you don't have all the people you need, a railroad quickly coagulates and service goes to the dogs.

STRANDED TRAINS

Case in point: BNSF priority merchandise train H-BELPHX1, which originated in Belen on Aug. 6 bound for Phoenix, by Aug. 11 had covered barely 150 miles. It was tied down just east of Gallup, N.M., its lead locomotives and distributed power unit still running. The H-BELPHX1 was like a lot of other trains that had horses but no way to leave the corral.

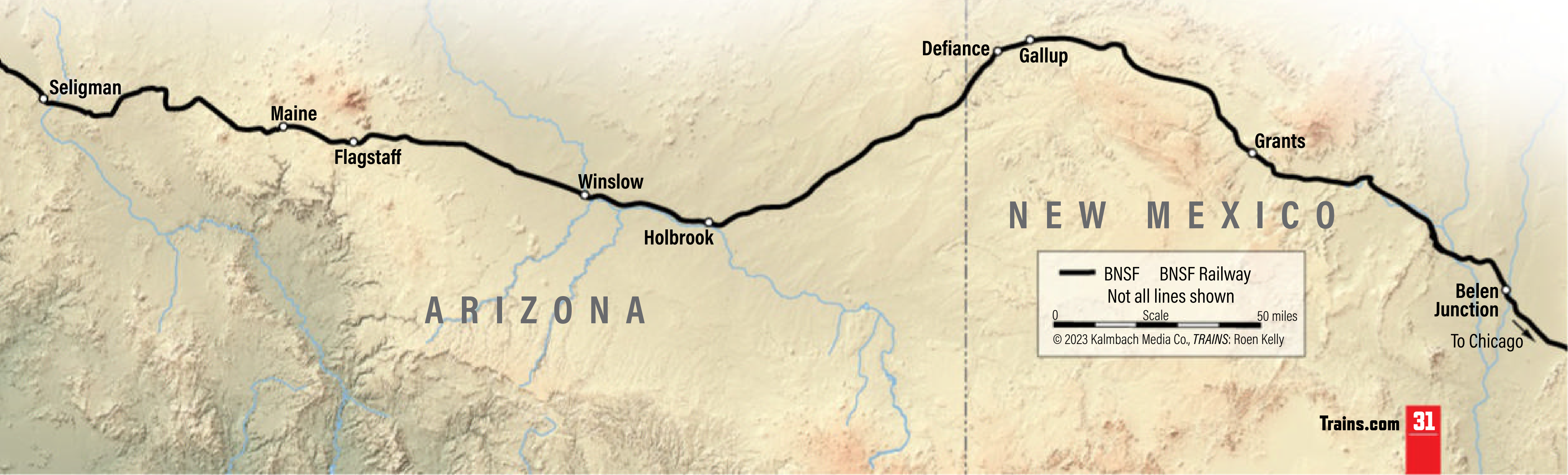
In the East, CSX's crew shortages began in the Southeast before migrating to the Midwest and then the Northeast. As CSX's Queensgate Yard in Cincinnati became bogged down in July, the railroad stashed five days' worth of Chicago-Cincinnati merchandise train M351 in sidings along the former Baltimore & Ohio main line between Chicago and Garrett, Ind. The congestion also waylaid M360/M361, a train pair linking Queensgate with Avon Yard in Indianapolis, for a few days. Said one crewman at the time: "It's snowballing bad."

At Selkirk Yard, outside of Albany, N.Y., a combination of crew shortages and congestion at the hump yard prompted CSX to tie down as many as 20 Selkirk-bound trains as far away as Buffalo and Syracuse, N.Y.; North Bergen, N.J.; and Philadelphia, according to union officials. CSX disputed those figures, but acknowledged crew shortages at Selkirk, its hub for traffic to and from the Northeast and New England.

Outbound traffic from Selkirk was affected, too. On the railroad's former Boston & Albany route, Selkirk-West Springfield, Mass., merchandise train M424 frequently was tied down on Track 2 in Westfield, Mass. — 7 miles short of its destination — for days at a time from August through October. On Aug. 21, for example, just 3 hours after a crew retrieved a parked M424 and brought it to West Springfield, another day's M424 rolled to a stop and took its place on Track 2. There it sat for three days. Twelve hours after it departed another M424 tied down at the same spot, where it sat for five days. And then another one took its place and sat for four days.

The train handles traffic bound for Connecticut and western Massachusetts, including short line Pioneer Valley Railroad — whose interchange track in Westfield connects to Track 1 adjacent to where the M424s were stuck. The short line's cars were in sight, yet out of reach. The stranded trains also meant that Genesee & Wyoming short line Connecticut Southern left West Springfield with short consists or just light engines.

Norfolk Southern's most severe crew shortages were centered on a dozen terminals where attrition was 50% higher than normal. Among them: Elkhart and Fort Wayne, Ind.; Cincinnati; Louisville, Ky.; Birmingham, Ala.; Chattanooga, Tenn.; and Buffalo and Binghamton, N.Y. They weren't the only areas to experience congestion on a railroad that had the biggest crew deficit. Harrisburg, Pa., is a crucial terminal where NS main lines radiate east to Baltimore, Philadelphia, and New Jersey, south toward Atlanta, and west toward Pittsburgh. Crewless trains sometimes tied down for a day or more on the controlled siding that gives NS a 5-mile section of triple track leading to CP Banks at Marysville, Pa. It's a key junction



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An eastbound Union Pacific freight rolls into Bosler, Wyo., on Sept. 2, 2022. UP engineers say the railroad has so tightly scheduled locomotive use that a unit failure causes delays to subsequent trains. David Lassen

where trains can head for Enola Yard and, via the landmark Rockville Bridge, the Harrisburg and Rutherford intermodal terminals, the Royalton Branch, and the Harrisburg Amtrak station.

The combining of 130-car empty coal trains into 260-car behemoths for the trip back to the Monongahela mines in western Pennsylvania contributed to congestion at Enola. It's a process that can tie up the yard for hours.

Union Pacific's crew shortages have been most significant on its main line across Nebraska and up to the Pacific Northwest. As a result, UP has maintained its efforts to combine trains, a strategy that allowed the railroad to make the most of its active crews.

But longer trains come at a cost. "I'm seeing a new circus each day," says one UP crewman in Pocatello, Idaho. "Nearly every train works pickups and setouts, fuel, air test, and to add or remove DPUs. They seem so obsessed with doubling trains that trains are tied down or in the terminal for 12 to 24 hours, regularly blocking all three main lines. So consequently, trains are tied down outside the terminal, too."

UP's practice of tightly scheduling the assignment of power for road trains also caused delays. "If a locomotive fails, the train sits for a day or more because there is nothing to spare," an engineer says. "Every locomotive is planned out and already scheduled to another train before it even arrives. What happens when it has a mechanical failure? … Just today blew a traction motor, so an outbound train now doesn't have enough power."

In some instances, crewless merchandise trains were stripped of some or all power. One such carcass was BNSF H-RICBAR1, which originated at Richmond, Calif., on Aug. 5. It ran right past its destination, Barstow, where terminal dwell was the system's highest at 38.7 hours. On Aug. 7, the train was tied down 57 miles east of Barstow in the passing siding on Ash Hill, with trailing unit 5535 as its remaining power. It was still there, baking in the sun, on Aug. 9.

On CSX, some Selkirk-bound merchandise trains suffered the same fate. "Some of those trains had the locomotives stripped

THE CREW BASE AT NEEDLES IS MORE THAN 470 EMPLOYEES. AS OF MID-AUGUST, BNSF HAD FILLED 34 OF 49 VACANT POSITIONS.

Maine event: ES44DC No. 7201 leads a westbound stack train through Maine, Ariz., on Aug. 10, 2022. A shortage of workers on extra boards made recrew needs a significant challenge across the southwest portion of BNSF's Southern Transcon.

After being delayed by a high-wind warning, eastbound stack train Q-LACATG6 eases into Needles, Calif., on the afternoon of Aug. 9, 2022. Filling crew positions in a small, remote community like Needles has been a problem for BNSF.

off and used on other trains. Some have run out of fuel sitting there," Joshua Therrien, local chairman of the SMART-TD union, wrote in an Aug. 22 letter to the STB.

CAUGHT SHORT

When a maintenance foreman requests track time on BNSF's Seligman Subdivision near Flagstaff, Ariz., the dispatcher quickly says he'll have to wait. "I've got seven eastbounds coming at you, and they're all short-timers," she explains. Her goal: Make sure the trains arrive at Winslow for a crew change without running afoul of the hours of service law.

Nowhere was harder hit by recrews than BNSF in California and across the Southern Transcon in Arizona, New Mexico, and Texas. In this wide swath of territory, the percentage of trains requiring a recrew en route was consistently the highest in the U.S. beginning in May, according to a review of data reported to the Surface Transportation Board.

In Barstow, you hear the dispatcher tell the crew of an inbound train on the Mojave Subdivision from Northern California to tie down their train — and then ride a crew van to pick up the crew of the following train, too. In Needles, a train had no more than left town when the dispatcher let the crew know they'd tie down their train on Ash Hill, 112 miles away.

BNSF's extra boards in the Southwest were threadbare. In Winslow, for example, the combined conductor/brakeman extra board in July had 18 slots but only one person assigned to the Seligman Subdivision. To the east out of Winslow, the combo board had 37 slots but just two people assigned to cover the Gallup Subdivision. This left no cushion for BNSF to absorb the impact of frequent recrews.

How did BNSF get into such a jam?

The railroad says congestion in Southern California was a culmination of factors, including operational constraints, resource levels, and bad weather. Labor leaders say BNSF's controversial Hi-Viz attendance policy played a role, too, because it led some veteran crews to leave the railroad. BNSF disputes this and says Hi-Viz has improved crew availability.

Whatever the case, this much is clear: The epicenter of BNSF's Southwest crew shortage has been Needles, Calif., an old Route 66 town on the Arizona border. As it goes, so goes the 179.6-mile Needles Subdivision to Barstow, the junction of BNSF's main lines to the Los Angeles Basin and Northern California via the Central Valley.

"Barstow is by design a staging location to meter trains over the Cajon into the Basin and Tehachapi into the Valley, and the Needles Subdivision is a buffer to assist in facilitating optimal meeting times," BNSF spokesman Ben Wilemon explains. "Early on we had a reduction of crews due to attrition. Many businesses in California encountered a similar situation as residents were relocating out of state to less expensive locations. It was difficult to balance employee needs as the volumes were coming in waves and were unpredictable."

Needles, with a population of less than 5,000 people, is not an easy place to hire. The closest cities to recruit conductors are Bullhead City, which has a competing job market with nearby casinos, and Lake Havasu City, which is a 45-minute drive to Needles.

BNSF's S-LBELPC1 eases through a work zone, part of a 29.23-mile third main project between Needles and Goffs, Calif. The project will make it easier to separate slower, heavier trains from priority westbounds on the 1.4% grade from Needles to Goffs.

BNSF train Q-STOCHI6 climbs out of Seligman, Ariz., on Aug. 10, 2022, passing an international intermodal train awaiting terminal space in Chicago. That train still had its rear distributed power unit, but the lead locomotives had been taken for use elsewhere.

Imbalanced traffic flows didn't help the crew situation as eastbound trains outnumber westbounds, leaving crews and locomotives out of position, particularly on the Needles Sub.

The active crew base at Needles is more than 470 train, yard, and engine employees. By mid-August, BNSF had filled 34 of the 49 vacant positions, and another 25 people had accepted the railroad's job offers. BNSF also had 36 crew members transfer temporarily to Needles from other areas on the system, a practice CSX, NS, and UP followed at their most affected terminals, as well. Needles staffing levels were similar in October, but with the railroad more fluid, crew demands were reduced.

At the other end of the Southern Transcon, intermodal customers have been slow to pick up their containers at Chicago terminals, particularly Logistics Park Chicago, or LPC, amid high volume and a shortage of chassis, truck drivers, and warehouse capacity.

"Over-ordering earlier this year has left retailers with stagnant merchandise in their stores and crowded warehouse distribution centers with remaining storage space at 1-2%," Wilemon says. "This has resulted in the usage of boxes on chassis as a storage solution where it's far cheaper than the cost of storing a container at a marine terminal or rail facility. As a result, chassis cycle times are impacting the availability of those assets to unload trains, and consequently, we are having to meter volume at ports."

BNSF worked with ocean carriers to shuttle long-dwelling containers from its terminals to off-site container yards.

Railroads have had to deal with the slow unloading issue since intermodal traffic rebounded in the second half of 2020. On BNSF, it helped create a downward spiral nearly 2,000 miles away.

"This has led to a significant number of eastbound trains heading for LPC being staged in sidings across the Southern Transcon waiting to arrive at and be unloaded at LPC," BNSF told the STB. "This phenomenon has, in turn, reduced the velocity of intermodal flatcars due to their inability to be unloaded and the subsequent slowing of their return to the West Coast to handle the continued strong demand for imported cargo. It has also limited our ability to handle other traffic on the Southern Transcon as sidings, mainline segments, and terminals are congested with staged freight."

You spot two such international stack trains on the Seligman Subdivision in Arizona on Aug. 10.

One of them, without locomotives, fills the 9,170-foot siding between East and West

TERMINAL DWELL AT BARSTOW FELL TO 34.8 HOURS, DOWN FROM 56 HOURS WHEN THE EMBARGO BEGAN

Chicago-bound stack train S-LBELPC1 leaves Barstow on Aug. 9, 2022. Two westbound intermodal trains await crews, while three more westbound trains are holding to the east. This left just one of three main tracks open between Barstow and West Daggett.

3663
UNION PACIFIC

A westbound Union Pacific grain train heads downgrade at Hermosa, Wyo., on Sherman Hill on June 18, 2018. UP issues in delivering feed to a California customer led to an emergency order from the Surface Transportation Board in June 2022. Alastair Poll

Berry, east of Kingman. Not long after sunrise at East Berry, a westbound stack train stops briefly at a private grade crossing. A deadheading engineer and conductor climb down from the second unit and get into a waiting crew van. An eastbound would later set out locomotives for their train.

Stashed in the siding at Seligman is an international stack train that has kept its distributed power unit but not its lead locomotives. You watch as Stockton, Calif.-Chicago stack train Q-STOCHI6 charges through town, past the idle marine boxes and Burma-Shave signs on Route 66.

NS and UP responded to congestion by limiting or prohibiting containers from entering several intermodal terminals. At various times from spring through fall, UP embargoed traffic or barred ingates at terminals in the Twin Cities; Seattle and Tacoma, Wash.; Portland, Ore.; Chicago; and the Los Angeles area. “Congestion across the entire supply chain continues to exist, which is pressuring our intermodal service product, especially at some of our inland intermodal terminals,” Kenny Rocker, UP’s executive vice president of marketing and sales, said in an Oct. 27 customer update.

Congestion on the California Division prompted BNSF to issue an embargo in late June on shipments of certain carload commodities bound for the Golden State. The embargo worked as intended: It prevented congestion from worsening over the Fourth of July holiday week, when many crews mark off. And it helped cut in half the number of trains holding for crews.

“The decision to put the limited embargo in place was not one we took lightly,” Chief Marketing Officer Steve Bobb and Chief Operations Officer Matt Igoe wrote in an Aug. 23 letter to customers. “Still, it was a step we knew we had to take in response to significant ongoing service challenges, especially in Southern California.”

By the time the embargo ended in September, manifest traffic backlogs were at their lowest level since December 2021. Terminal dwell at Barstow, where BNSF classifies traffic to and from the Los Angeles area and northern California, fell to 34.8 hours, down from 56 hours when the embargo began, and has held steady at around 30 hours since.

The number of trains requiring a recrew also improved significantly by October, falling to 8% on the California Division and 9% on the Southwest Division as crew ranks grew and congestion eased. And by Halloween, BNSF was current on shipments to inland intermodal terminals.

BULK TRAIN BLUES

In terminals where railroads are particularly short of engineers and conductors, operations people have had to play a game of train crew triage. If there are more trains in the lineup than the number of rested crews available, the railroads have to decide what freight moves and what gets held. Typically, the pecking order is intermodal, followed by merchandise, and then bulk traffic.

Yet sometimes that formula doesn’t work. Normally, unscheduled bulk trains have the lowest priority on the railroad because they deliver grain or coal to large stockpiles where timing is not crucial. But with chicken feed supplies running low and coal inventory dwindling at utilities in the Southeast, CSX has had to devote scarce crews to unit trains. That’s meant some merchandise trains have taken delays of 24 hours or more.

“We’re in an environment when we have … to make sure that chickens get fed and … lights stay on,” Jamie Boychuk, CSX’s executive vice president of operations, said on the railroad’s July earnings call. He added: “It’s a just-in-time service. And it never was before.”

Midwestern ethanol producers have complained to regulators about being last in line, and coal mining companies in September told federal regulators that erratic service, particularly on CSX and NS, had forced them to curtail production even as demand for coal rose.

UP found out the hard way that bulk customers cannot be ignored.

The STB on June 17 issued an emergency service order requiring UP to prioritize corn shipments to a California poultry and feed producer. Foster Farms is the largest chicken producer in the West and uses UP-delivered corn to make the feed that thousands of dairy cattle and millions of chickens depend upon. Repeated UP service failures forced Foster Farms to suspend production at its

ON-TIME PERFORMANCE, FOUR LARGEST CLASS I RAILROADS

Week ending May 27 v. Week ending Oct. 10 NA—Not available

Railroad	BNSF			Union Pacific			CSX			Norfolk Southern		
	Goal	5/27	10/10	Goal	5/27	10/10	Goal	5/27	10/10	Goal	5/27	10/10
Manifest	63%	53%	63%	70%	69%	70%	80%	66%	87%	61%	52%	61%
Grain	75%	59%	45%	81%	67%	64%	75%	82%	96%	NA	NA	NA
Coal	75%	68%	71%	81%	73%	83%	90%	96%	98%	NA	NA	NA
Automotive	63%	62%	70%	NA	NA	NA	NA	NA	NA	NA	NA	NA
Crude oil	70%	55%	61%	81%	34%	53%	NA	100%	100%	NA	NA	NA
Ethanol	50%	25%	36%	81%	53%	58%	90%	74%	85%	NA	NA	NA
Intermodal	70%	63%	79%	80%	70%	73%	95%	95%	99%	93%	95%	93%

facilities in Traver and Turlock, Calif., creating the prospect that livestock would go hungry or have to be euthanized.

Over UP's objections, the board ordered the railroad to live up to its promise to add a fifth 100-car unit train set to Foster Farms service until volume commitments were reached; prioritize unit trains, crews, and locomotives bound to and from Foster Farms; and to provide the STB with daily updates.

"We have failed to provide adequate service to Foster Farms," UP CEO Lance Fritz wrote in a June 16 letter to the board. "I am writing to convey Union Pacific's firm and clear commitment to providing Foster Farms the service it deserves and the service we expect to provide."

Ultimately the corn inventory was replenished. In fact, UP had to divert three of its last 11 Foster Farms emergency service order trains to other customers because Foster couldn't accept more corn.

SERVICE SUFFERS

Throughout 2022, shippers faced widespread delays and unpredictable transit times on the big four U.S. railroads, even as service remained at relatively normal levels on Canadian National, Canadian Pacific, and Kansas City Southern.

Overall on-time performance for the big four U.S. systems fell from a pre-pandemic average of 85% to just 67% in the last week of May 2022, according to data the railroads reported to the STB regarding trains that arrived at their destinations within 24 hours of original estimates. The board began requiring expanded performance metrics a few weeks after its April 26-27 hearings on rail service problems. Regulators also ordered the railroads to submit service recovery plans and targets for operational improvements.

STB Chairman Martin J. Oberman questioned whether the railroads would reach their year-end goals. "The service recovery targets provided by the railroads were quite modest in terms of their ambition, and were understood to be only goals for immediate service recovery," Oberman told *Trains* in late October, just before the board extended the expanded data reporting requirements until May 2023. "While some carriers have in recent weeks begun to hit those targets consistently, there is still volatility in these metrics and the question will be whether the railroads can sustain — and improve substantially beyond — this performance going forward in order to provide the level of service needed by their customers and increase their support of the nation's economy."

Carload shippers say their experience mirrors on-time performance trends. Some 90% of chemical shippers, for example, reported longer transit times, while 66% suffered from missed local switches, and 64% said they had reduced days of local service.

Service on the big four railroads is improving slowly but remains uneven amid ongoing and sporadic crew shortages, shippers said at the North East Association of Rail Shippers conference in late September.

One thing that's helped: Resumption of hump operations at several yards, says Eric Monger, vice president of KBX Rail, the logistics arm of the Koch Industries conglomerate. KBX ships more than 180,000 carloads annually of everything from lumber and toilet paper to diesel fuel and anhydrous ammonia.

NS resumed hump operations at its yards in Macon, Ga., and Bellevue, Ohio, this summer. UP reopened the eastbound hump at Bailey Yard in North Platte, Neb., and resumed hump operations at Davidson Yard in Fort Worth while construction is under way on an intermodal terminal expansion at its yard in West Colton, Calif.

Missed switches remain a problem for shippers of steel, scrap metal, and treated lumber products, who said service problems bounce from location to location and railroad to railroad.

This was reflected in a quarterly rail shipper survey by investment firm Cowen. "Despite the significant push by the Class Is to ramp hiring to improve rail service, shippers continue to feel the impacts of service issues, even worsening sequentially according to

NEARLY HALF OF CHEMICAL SHIPPERS SAID SERVICE WAS WORSE IN JULY COMPARED TO THE FOURTH QUARTER OF 2021

A westbound BNSF train with J.B. Hunt boxes departs Winslow, Ariz., on Aug. 11, 2022, as an eastbound approaches. J.B. Hunt executives reported unprecedented intermodal delays as of August, but by October service had improved dramatically, particularly on BNSF.

4221
4221
6913
6911

At sunset on May 9, 2021, an eastbound BNSF manifest freight makes its way around a stopped intermodal train and past the signals at Ludlow, Calif. Railroads say their service issues are easing as crew availability improves. Kenneth Edmier

our survey," Cowen analyst Jason Seidl wrote in an Oct. 13 note to clients.

Short lines also felt the pain. Says one short line leader at the mercy of the big four systems: "Class I interchange performance is brutal."

Over the summer intermodal service was running at historically low levels, with trains routinely arriving a day or two behind schedule, J.B. Hunt executives said in August. BNSF is J.B. Hunt's railroad partner in the west, while NS is its primary carrier in the east. In October, however, J.B. Hunt said rail service had improved considerably — particularly on BNSF — and was on par with levels of early 2021.

SIGNS OF HOPE?

By October, service was on the mend as more conductors completed training and entered active service, which helped reduce the number of trains holding for lack of crews or power. As railroads neared or met their train and engine crew hiring goals for the year, executives said they expected their railroads to return to pre-pandemic service levels by the end of 2022 or in early 2023.

Most operational data pointed to green shoots. Chief among them: Average train speeds on BNSF, CSX, and NS improved all summer and by October were at their highest levels in more than a year. Velocity is a key measure because the faster a railroad moves, the fewer crews and locomotives it needs. The three railroads also showed considerable improvement in the on-time performance for merchandise carloads and intermodal trains.

UP's recovery showed progress over the summer but lagged in the fall. In October, UP was still struggling to meet demand for unit trains of coal, grain, and rock. And its performance metrics — including average train speed, trains held for power or crews, and on-time performance — had plateaued.

With conductor training classes full and railroads determined to put the service crisis in the rearview mirror, analysts saw trouble around the bend. Leading economic indicators portend a downturn that would reduce railroad volume. That raised the prospect of the F word: furloughs.

"This may seem premature, but we're soon going to be dealing with a situation where some of the big U.S. railroads start furloughing train crews, which will create some awkward optics with customers and the regulator," Loop Capital Markets analyst Rick Paterson wrote in an October note to clients.

The number of crews a railroad needs hinges on a combination of staffing levels, velocity, and volume. If traffic declines as the railroad speeds up, the crew shortage will quickly turn into a crew surplus. "To be sure there's still a lot of fine-tuning to be done at the individual crew district level, but once that's done the railroads are going to reflexively want to furlough excess crews, like they've always done," Paterson says.

And that could leave the railroads unprepared to handle the inevitable rebound in traffic. Fadi Chamoun, an analyst at BMO Capital Markets, notes that railroads' history of periodic crew shortages has hurt service and hampered the industry's ability to grow. Will railroads now look at surge capacity differently?

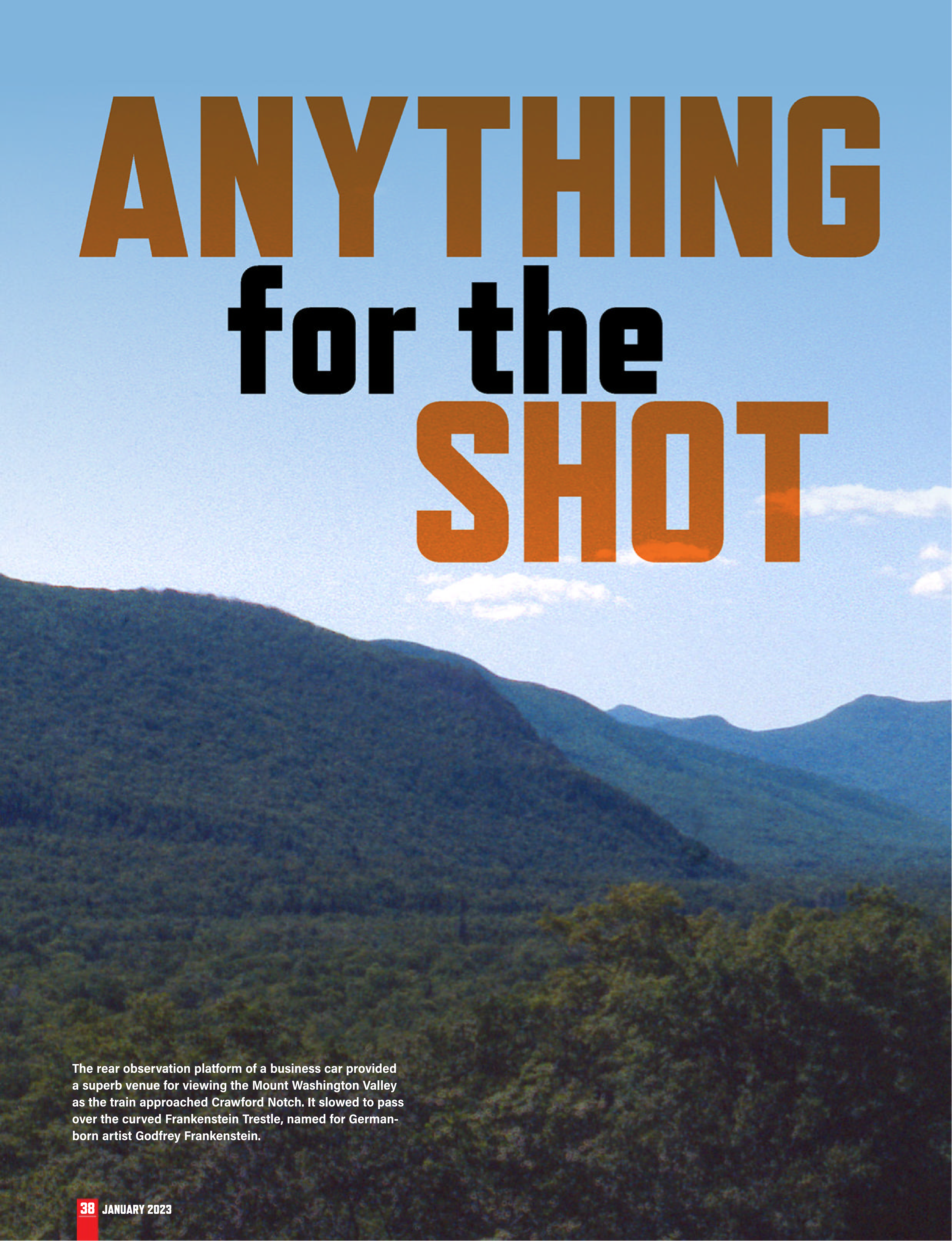
"We're coming out of this learning lessons," Boychuk said on CSX's earnings call in October. "If we haven't learned lessons along the way as an industry — it's not just CSX — then we haven't been watching or listening to our customers."

If freight demand softens, Boychuk says CSX wants to protect its workforce and will rely on attrition and reducing conductor training class sizes before resorting to furloughs. "We are going to be prepared to handle all the traffic that comes back at us," Boychuk says. NS Chief Operating Officer Cindy Sanborn echoed that sentiment on the railroad's earnings call in October.

Shippers and regulators have been encouraging railroads to build adequate crew capacity buffers.

"We'll see how many management teams actually do so given ever-present Wall Street pressure to lower operating ratios and the fact that scrutiny and heat from the STB and other federal entities will have moderated by then," Paterson says. "As usual, management teams that are unable to build in this resiliency will be exposed sooner or later during the volume recovery or an extreme, yet inevitable, weather event."

ANYTHING for the SHOT



The rear observation platform of a business car provided a superb venue for viewing the Mount Washington Valley as the train approached Crawford Notch. It slowed to pass over the curved Frankenstein Trestle, named for German-born artist Godfrey Frankenstein.

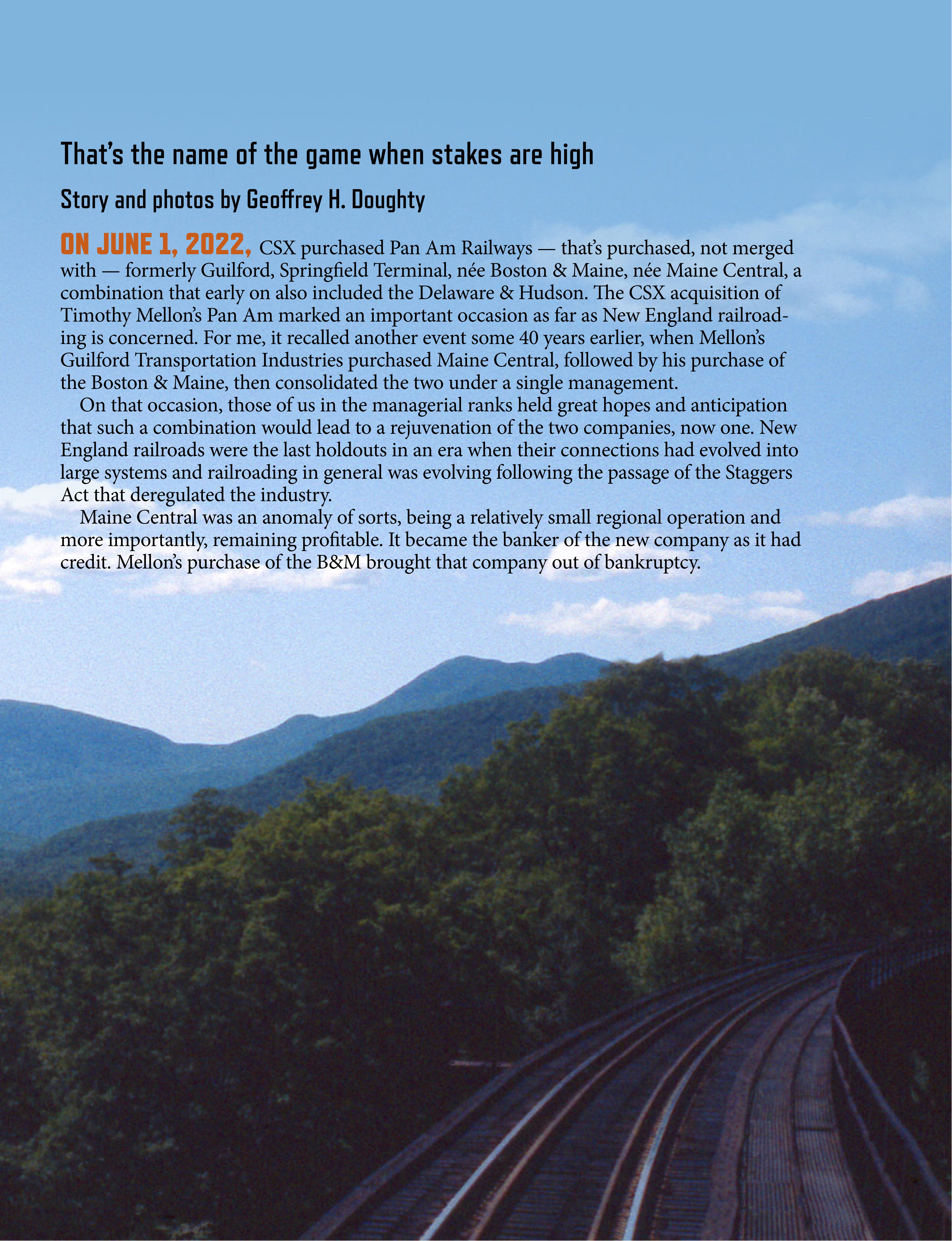
That’s the name of the game when stakes are high

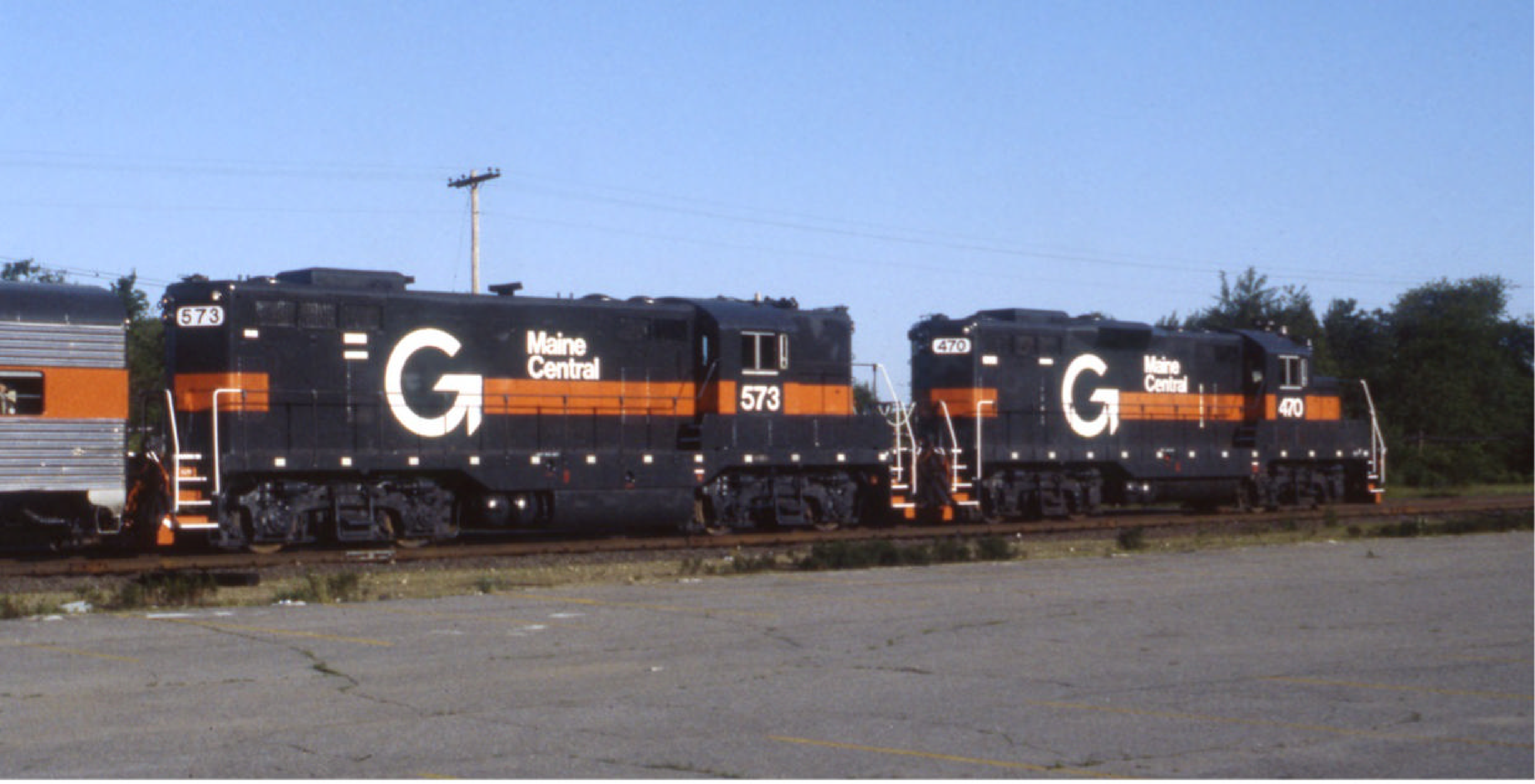
Story and photos by Geoffrey H. Doughty

ON JUNE 1, 2022, CSX purchased Pan Am Railways — that’s purchased, not merged with — formerly Guilford, Springfield Terminal, née Boston & Maine, née Maine Central, a combination that early on also included the Delaware & Hudson. The CSX acquisition of Timothy Mellon’s Pan Am marked an important occasion as far as New England railroading is concerned. For me, it recalled another event some 40 years earlier, when Mellon’s Guilford Transportation Industries purchased Maine Central, followed by his purchase of the Boston & Maine, then consolidated the two under a single management.

On that occasion, those of us in the managerial ranks held great hopes and anticipation that such a combination would lead to a rejuvenation of the two companies, now one. New England railroads were the last holdouts in an era when their connections had evolved into large systems and railroading in general was evolving following the passage of the Staggers Act that deregulated the industry.

Maine Central was an anomaly of sorts, being a relatively small regional operation and more importantly, remaining profitable. It became the banker of the new company as it had credit. Mellon’s purchase of the B&M brought that company out of bankruptcy.





Led by two of Maine Central's venerable GP7s, Nos. 470 and 573, the train backed through a nearby junction before heading up the scenic Mountain Division, soon to be abandoned in favor of a longer Maine Central/Boston & Maine/Delaware & Hudson routing.

The NBC crew was used to "photo ops." Left to right: producer, the camera duo, and (the late) Fred Briggs, after arrival at Whitefield.

Setting the scene

To celebrate the consolidation, (the late) David Fink, Sr., president at the time, felt there should be a special train to showcase the new company, slated to begin on July 1, 1983. The four-car train was led by two Maine Central GP7s (No. 470 and No. 573, Maine Central's remaining steam generator-equipped unit), now painted dark gray and lettered for their new owner.

On the morning of June 29, the train would leave from the parking lot behind Maine Central's general office building, back to Mountain Junction just behind the train, and proceed up Maine Central's scenic Mountain Division, soon to become a fatality of the acquisition. It would proceed to Whitefield, N.H., where it would join Boston & Maine's line from Berlin, N.H., and continue west to the main line parallel to the Connecticut River to Greenfield, Mass., then to Boston for a brief onboard celebration on the 30th before returning to Portland that evening. The acquirement by Mellon was big news back then. Railroad mergers were still viewed as important financial events, and this one held the promise of transforming rail transportation in Massachusetts and northern New England.

To Fink and Mellon, the trip was of such importance that, in addition to state officials — from Maine, New Hampshire and Vermont — members of the press were invited to ride. David Fink would be available to conduct interviews.

"Why not Timothy Mellon?" a reporter asked. "I'm prettier," Fink replied.

Each of us accompanying the train was given a specific assignment. Mine was to babysit a television crew from the Boston office of NBC Nightly News and make sure they didn't get hurt trying something stupid. Fred Briggs, NBC's New England correspondent, along with his three-member crew, would ride from Portland to Whitefield. They would ride back to Boston in a car dispatched for them by NBC.

I knew Fred Briggs by sight, having seen him on TV countless times. As he was talking with his crew, I introduced myself and told him that I was his liaison. My job, as I explained to him, was to make sure they could shoot what they wanted, safely, of course, and to answer any questions. As I expected, there was nothing pretentious about the man; he was friendly and down to earth.

Lights, camera, action!

Could the camera crew take shots from the locomotive? I thought if they wanted to do that, the best time would be upon departure, although I explained that the lead locomotive's cab might be tight. We had our road foreman as engineer running the engine and a trainmaster. The regular engine crew, an engineer and fireman, were riding in one of the coaches as they were still being paid — union rules. They could be interviewed, I told Briggs.

What I hadn't realized was a classic cameraman's tenet: Anything for the shot.

As it turned out, I took only the cameraman into the cab and returned just before departure. I was relieved. That was my first challenge, and it went well. But they "needed" more.

As the train departed, I found seats for the camera crew in the *Champlain*. This car, along with the business car 100, was traded with the D&H through a curious arrangement. The D&H was on its knees, financially, in debt to the State of New York and others, no doubt. The State had taken as collateral about everything of value belonging to the company in exchange for tax and financial assistance.

With the potential buyout of the D&H in Mellon's plan, the D&H would become the westernmost component of the "system." Maine Central, being the one of the three that had any money, bought D&H equipment so the bankrupt railroad could buy fuel for its fleet of locomotives, just one part of the deal.

David Fink, confident that New York would approve the sale to Guilford, told us that the D&H needed our help, so Maine Central purchased and exchanged some locomotives and rolling stock, i.e., the *Champlain* and the 100, but lettered for Guilford. Thus, both cars became part of the Guilford business train along with Maine Central's quartet of cars (the business car No. 333, two former Penn Central stainless steel passenger coaches, and No. 322, a standard baggage coach with an electric generator).

Mission impossible

As the train gained speed, Briggs wanted to do interviews for background. While he was doing that, the camera crew asked if they could open one of the vestibule doors to shoot video. That seemed reasonable enough, I thought. They were Dutch doors that opened halfway, and the crew could shoot without difficulty. I was naïve. They wanted more than that.

Not satisfied with leaning out the door, the lead cameraman wanted me to open the trap so he could take a shot from close to the track. At any speed this was dangerous, and I apologized saying such a request was out of the question.

What I hadn't realized was a classic cameraman's tenet: Anything for the shot. They will do anything to get a good shot.

I told them it was too risky. If he were to fall out there would be Hell to pay, and I would never forgive myself.

With straight faces they protested that this was important and hailed, "We have insurance!" He said I could hold onto his belt while he sat on the lower vestibule step holding the camera down and out far enough to get the shot. "It'll be very safe," he exclaimed.

The comfortable lounge of the former D&H (ex-D&RGW) Pullman-Standard *Champlain* was an exquisite place to relax and enjoy the scenery as the train ascended New Hampshire's White Mountains.

All this time, the train was moving along. His assistant even joined in and said, "I'll hold you while you hold him." Against my better judgment, I gave in. "BUT… for 10 seconds and you're done!" I said.

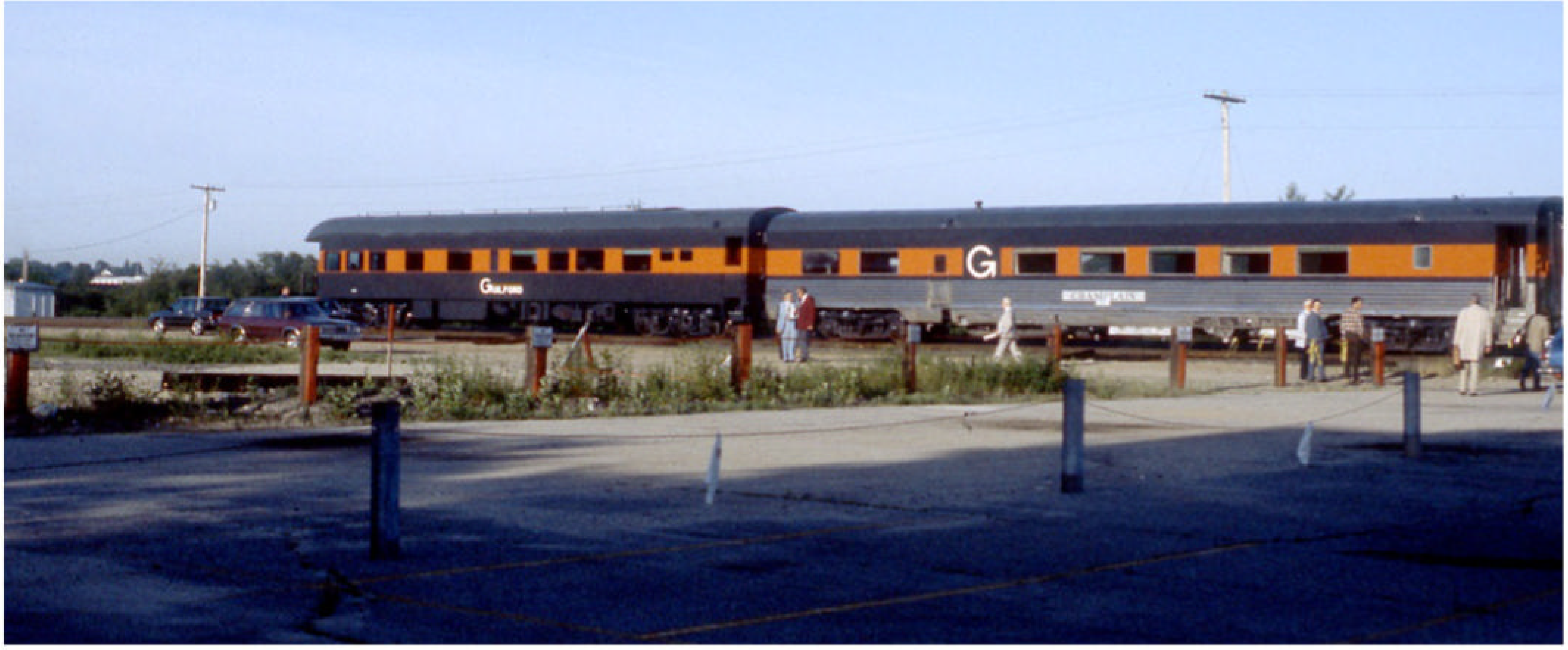
They agreed. I sprung the trap, grabbed onto his belt at his back while the other guy grabbed my belt, and the three of us slowly and carefully got into position. The camera was rolling.

I realized in that time frame that if anyone walked by and saw what we were doing, my career was over. I still cringe after all these years. What was I thinking? I suppose at the time I justified it as doing what was good for the company as it was good publicity.

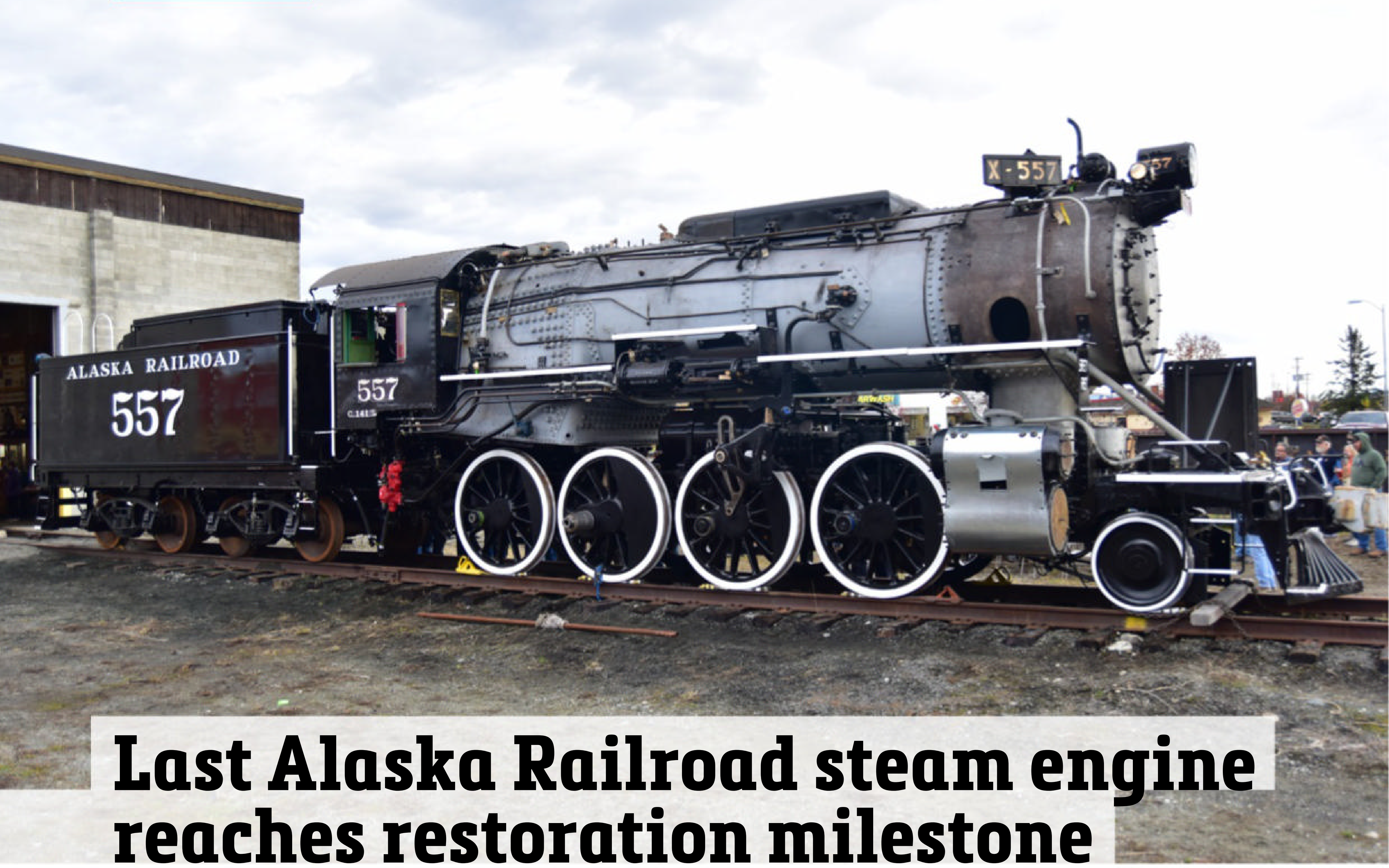
"Anything for the shot." When 10 seconds were up, I yelled, "CUT!" He said it was good enough and retracted the camera. Somehow, we all got back into the vestibule without any problems. I closed the trap, shut the door, and swore both men to secrecy about what we had done. Nobody was to be told, not even Briggs.

We arrived at Whitefield after a great ride. Briggs, happy that he had an interview and great video, was assured. They thanked me for my assistance, and I breathed a sigh of relief.

Two nights later my father called me and said he saw the footage on the Nightly News. He asked me how they managed to get the down-at-track-level shots. I told him he didn't want to know.



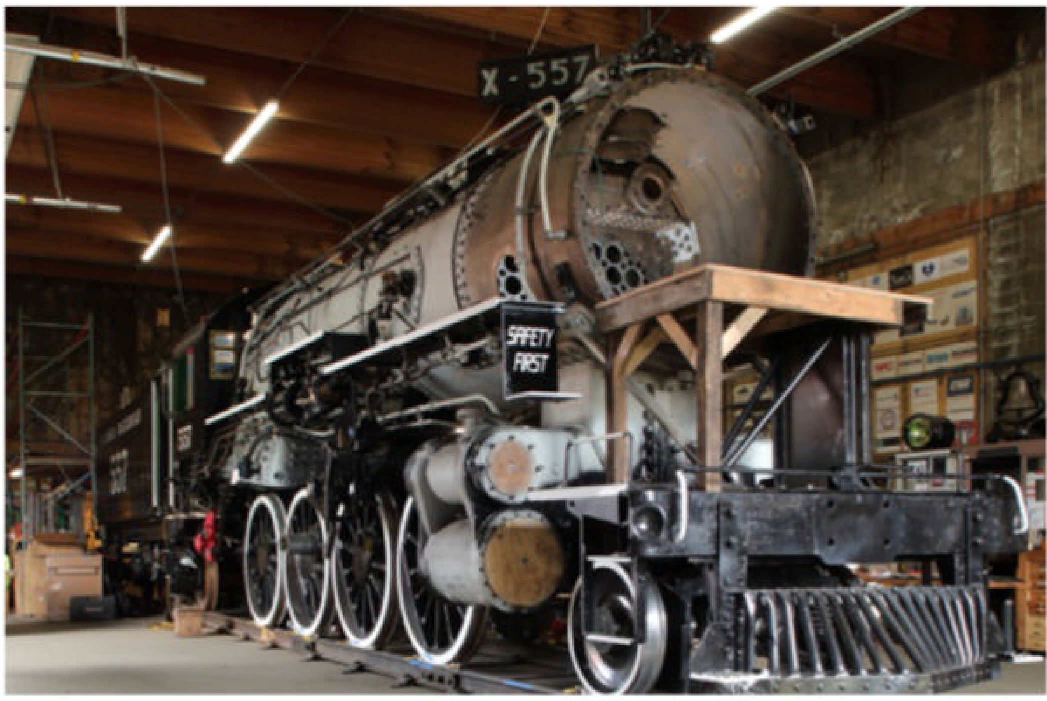
The freshly-painted inspection train came down from Maine Central's Waterville Shop the night before the trip. In the early morning, it was spotted on the main line behind the company's general office building.



Last Alaska Railroad steam engine reaches restoration milestone

Tender work completed, reattached to engine

▲ **Alaska Railroad No. 557, mated for the first time with its completed tender, stands outside the restoration shop on Oct. 8, 2022 for public viewing. The rebuild, which will return the last Alaska Railroad steam locomotive to operation, is scheduled to wrap up in 2024.** Terry Douglas



Alaska Railroad No. 557 still needs a number of major items installed, including running gear, boiler tubes and superheater flues, before testing and certification. Michael Bridges

IT WAS THE LAST STEAM LOCOMOTIVE in service on the Alaska Railroad, and now No. 557 is being restored to operate again on the final frontier. The project recently reached a significant milestone with the completion of work on the tender. The tender has been reunited with the locomotive.

The story of No. 557 begins during World War II. The locomotive is one of 2,120 S-160 class 2-8-0 Consolidations built for the U.S. Army Transportation Corp. between 1942 and 1945. They were originally intended for use in Europe and Africa. Before all were retired, members of the S-160 class worked on every continent except Australia and Antarctica.

Twelve of the S-160s were transferred for service in Alaska in an attempt to relieve an acute motive power shortage. The Alaskan 12 were further modified for the northern climate with larger compound air compressors mounted on the front pilot, steam coils to provide heat for the cabs, and snowplows fashioned for seasonal use. Additionally, in 1954, when No. 557 became the final steam locomotive on the roster, it was converted from coal firing to oil burning. The railroad then eliminated its coaling facilities.

The locomotive that became Alaska Railroad No. 557 was built by the Baldwin Locomotive Works with serial number 70480. While working for the USATC, the locomotive was U.S. No. 3523. It was renumbered to No. 557 when it arrived in Alaska in December 1944.

The locomotive became the last Alaska Railroad steam engine due to a diesel shortcoming. The area around Nenana, Alaska, suffers from the regular flooding of the Tanana and Nenana Rivers. The railroad's new diesel-electric locomotives had considerable trouble navigating flooded tracks, as their traction motors would short out. No. 557 was found to easily ford up to 2 feet of water over the rails. Aside from flood duty, No. 557 pulled the occasional special-event train. In fact, the last train it pulled before being retired was a run from Anchorage to the state fair in Palmer, Alaska, on Sept. 5, 1959.

A Washington scrap dealer and museum owner, Monte Holm, purchased No. 557 in 1964. On June 14, 1965, the locomotive left from Whittier, Alaska, aboard Train Ship Alaska bound for Everett, Wash. Instead of scrapping the engine, Holm preserved it for school groups to witness steam engine history in action. For the next three decades, Holm kept it in running condition and parked at his hobo museum — the House of Poverty — in Moses Lake, Wash. Upon his passing the museum was closed and the locomotive left without a caretaker.

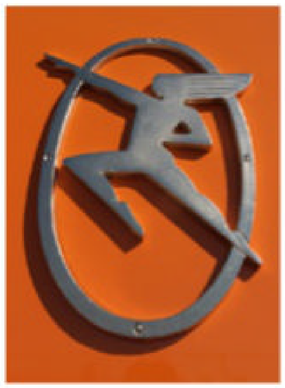
In 2011, Jim and Vic Jansen, owners of several Alaska-based transportation companies, purchased the locomotive from the Holm estate, ensuring its return to Alaska. The Jansens donated the locomotive to the Alaska Railroad with the stipulation that it be relocated to Anchorage, rehabilitated, and eventually put back into service. The Alaska Railroad arranged for No. 557 to be moved home, arriving in Whittier, Alaska, on Jan. 3, 2012.

Since that time, The Engine 557 Restoration Co., a non-profit group established to restore, maintain, and operate the locomotive, has been working on its rebuild. Thus far over 150,000 hours have been given to the project. At this point, the crew is working to reattach appliances to the locomotive, and install boiler tubes and superheater flues. Everything on the locomotive needs to be adjusted and tested, leading to hydrostatic test of the boiler to 285 pounds per square inch.

Completion of the project is estimated for 2024 with a total cost of $2 million. Presently, an additional $350,000 needs to be raised to complete the project. For additional information on No. 557's restoration, please visit: www.557.alaskarails.org. *— Bob Lettenberger*

Cast Hiawatha emblem stolen from Skytop car

One of two original castings removed from car side



A HIAWATHA “RUNNING INDIAN” LOGO from Milwaukee Road Skytop lounge observation car *Cedar Rapids* has been stolen, car owner Friends of the 261 reports. The car was recently used on the *Autumn Colors Express* in West Virginia and had been returned to its home in St. Paul, Minn., when the logo was stolen. It is believed the theft was committed the night of Oct. 25, 2022, in the Minnesota Commercial Railway yard in St. Paul.

The theft was planned, according to Steve Sandberg, president and chief operating officer of the Friends of the 261. “To remove the logo, you had to use a special type of wrench,” Sandberg says. “It's not like they could walk up and use a screwdriver, you actually had to order this special wrench. Whoever committed the theft had to have planned it.”

The casting is an original. The Skytops wore two such emblems, one on each side. Previously the Friends had the two castings chrome-plated. This will make the stolen casting easier to identify. “If anyone comes across a chrome-plated Hiawatha logo, that is the one that was stolen,” Sandberg says.

The group has cast aluminum replicas of the emblem, one of which will be chrome plated and installed in place of the stolen original. “We will end up putting it on so … even if you have the specialty wrench you could not get if off,” Sandberg says.

Anyone with information about the theft is asked to contact the Friends at www.261.com. — *Steve Glischinski*

Training firemen on a miniature stoker

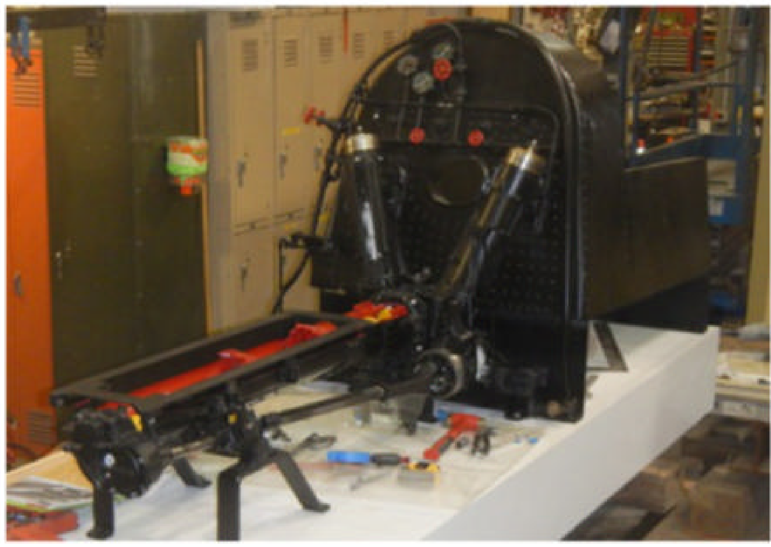
Museum restores Duplex training tool to operation

A TRAINING DEVICE for steam locomotive firemen has been restored at the Railroad Museum of Pennsylvania. Built by the Duplex Stoker Co. of Pittsburgh, the machine is a fully operational scale model.

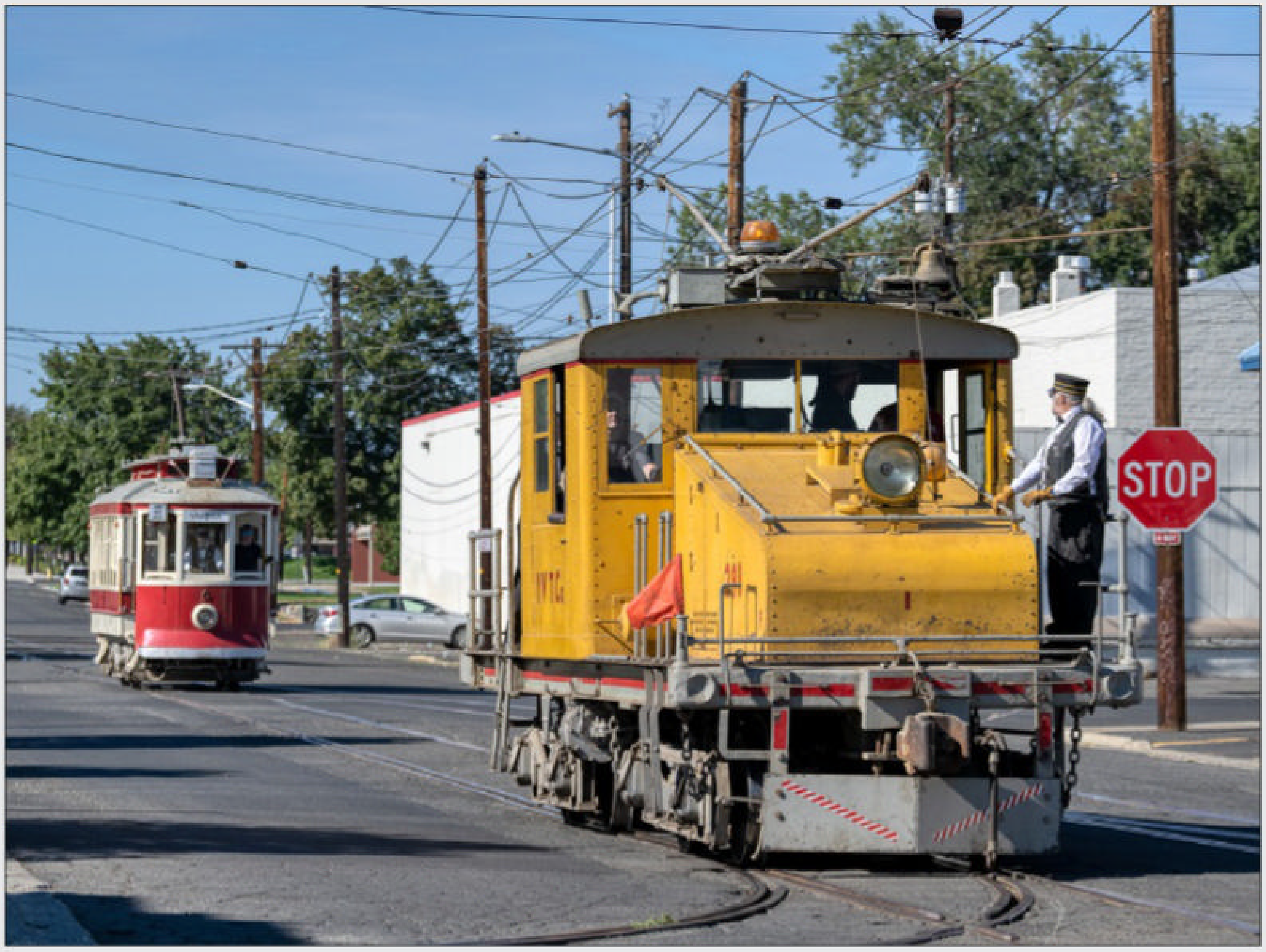
The Duplex company made a number of miniature stokers for use by railroads to train firemen in the safe and economical firing practices to conserve fuel and reduce smoke output. This machine was delivered to the Reading in early 1943, as the Reading had a substantial number of locomotives equipped with Duplex stokers. It was used in a mobile training facility for several years, until steam was retired in the early 1950s.

Somehow, this machine survived in storage in Reading until it was purchased in 1970 by George M. Hart, the museum's first director. It was displayed at the museum for a few years before being stored in a boxcar in 1983. There it remained until 2019.

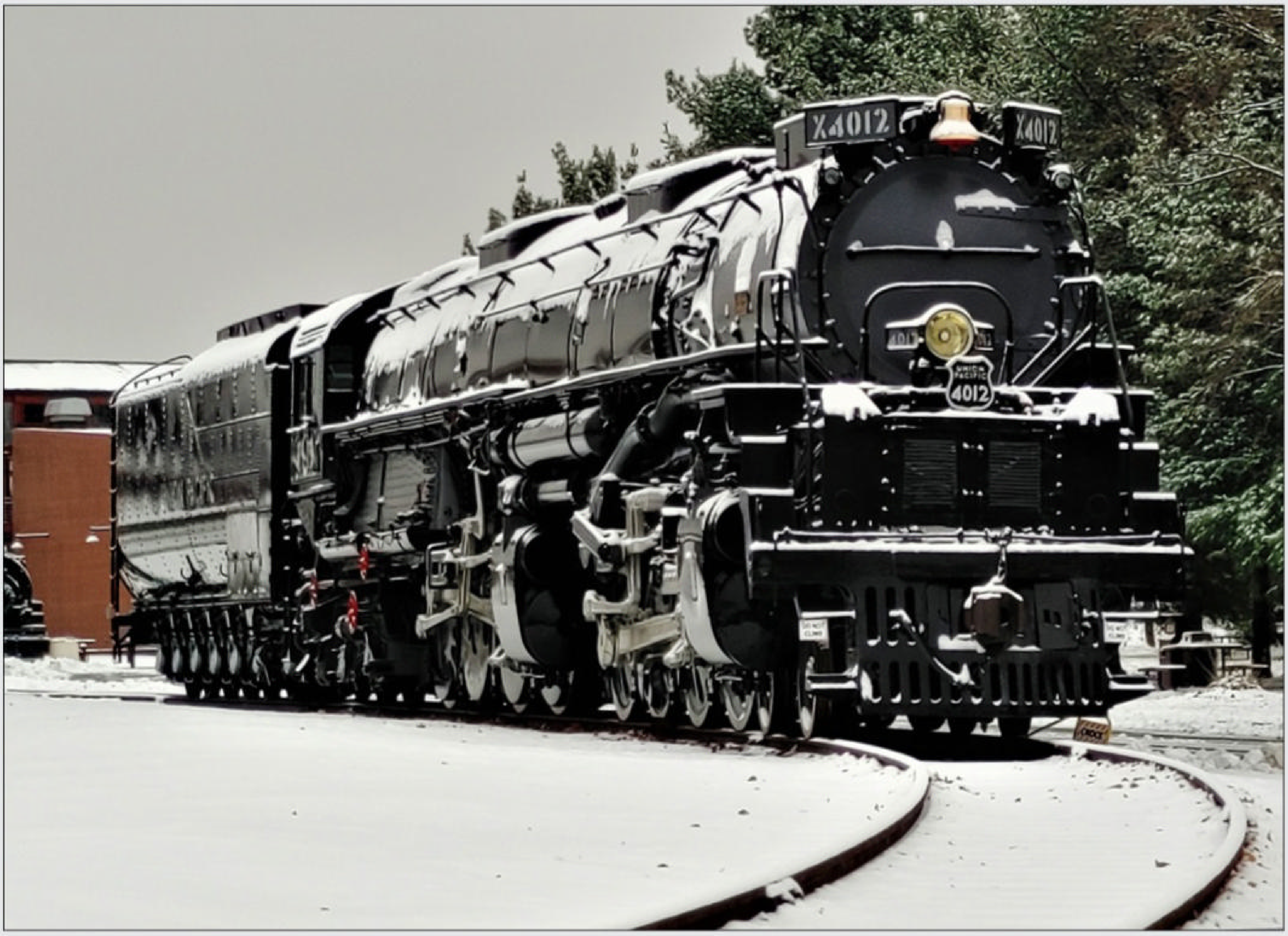
The stoker was moved to the museum's restoration shop in 2020. Surprisingly, it was still operable after more than 60 years. In late 2021, volunteers disassembled it for an overhaul. At some point, everything had been painted black, but an examination found several colors had been used to designate components. The main stoker screw, for instance, is bright yellow. There are also small windows allowing students to observe the rack and pinion that drives the twin elevator screws and the gearing that powers the main screw. — *Wayne Laepple*



The Railroad Museum of Pennsylvania's Duplex Stoker trainer is the only fully operational example known to exist. Wayne Laepple



TO MARK THE 100TH ANNIVERSARY of the Yakima Valley Transportation line, a special run was made by YVT No. 298, a 50-ton GE freight motor, delivered in 1922. The Union Pacific owned the 44-mile line until 1985, when it was donated to the City of Yakima, which turned it into an operating museum. No. 298, the line's primary freight motor, is still undergoing traction motor repairs, but enough work has been completed that the motor could make a birthday appearance. Robert Harbison



WITH CAB TOURS CONCLUDED for the season and snow accumulating in northeast Pennsylvania, Union Pacific No. 4012 awaits spring at Steamtown National Historic Site in Scranton, Pa. Of the eight Big Boys that remain, five are exhibited outdoors. Steamtown, National Park Service

Strasburg Rail Road steam engine hits excavator standing on siding

No injuries reported; locomotive is back in service in less than a week

STRASBURG RAIL ROAD'S 4-8-0 STEAM ENGINE No. 475 collided with a tracked excavator or "trackhoe" parked on a spur Wednesday, Nov. 2, punching a hole in the locomotive's smokebox. No injuries resulted and the engine, running light, remained on the track.

On Monday, Nov. 7, No. 475 had been repaired and was back in service, according to Jim Hager, the railroad's general manager. This confirmed initial reports that the damage looked worse than it actually was.

Allegedly, the combination of a misaligned switch — apparently left open when a maintenance crew tied down the trackhoe on the spur — and the engine crew's failure to operate the locomotive at "restricted speed" contributed to the collision's cause.

Damage to the locomotive included the smokebox front and door, some auxiliary metal pieces, and the headlight. The bucket, pistons, and hydraulic hoses on the trackhoe were damaged in the collision. The trackhoe arm did not pierce or deform anything vital to steam operation, such as No. 475's flues or front flue sheet.

The accident occurred at 11:23 a.m. as the first passenger train of the day was reversing ends at the connection with Amtrak's electrified Philadelphia-Harrisburg, Pa., Keystone Corridor, a location that is commonly called Leaman Place Junction. As is customary, the train departed the station at Strasburg with the engine running tender-forward on the 4½-mile trip to Paradise, Pa. There, the train's passenger cars were left standing while the engine cut away and ran around to couple to the west end of the cars for the return trip. It was during this routine swapping of ends that the incident took place.

Contributing further to the situation is that, during the runaround move, the engine crew typically waves to the passengers on the standing train, potentially diverting attention from the track ahead.

The accident was widely viewed online via a Virtual Railfan streaming camera affixed to a pole at the exact switch involved, and by a passenger riding the train who was taking video of the runaround move.

The Federal Railroad Administration was slated to visit the railroad to examine No. 475 and interview the crew.

Founded in 1832, Strasburg Rail Road is the oldest short line in the United States. Beginning in 1959, it was transformed from a weed-grown feeder line to the Pennsylvania Railroad into a major steam-powered excursion carrier with a machine shop that caters to many other steam railroads. Situated in the heart of Pennsylvania Dutch tourist country, it handles 250,000 to 300,000 passengers a year. It also services several freight customers.
— *Dan Cupper*

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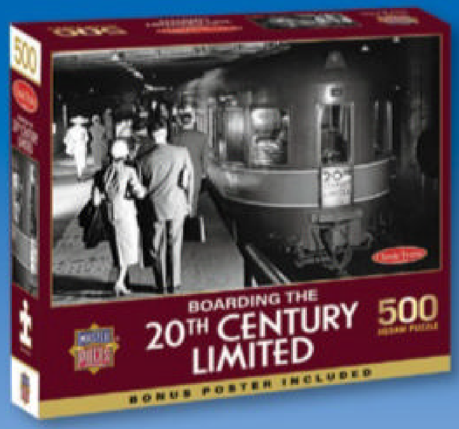
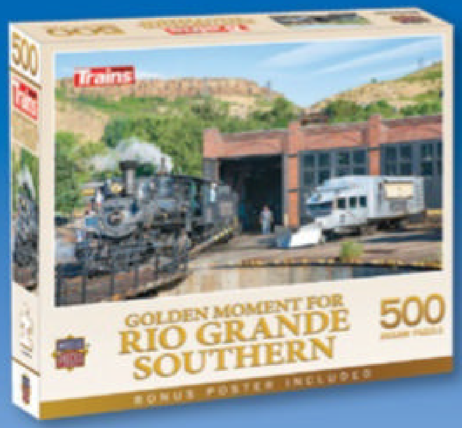


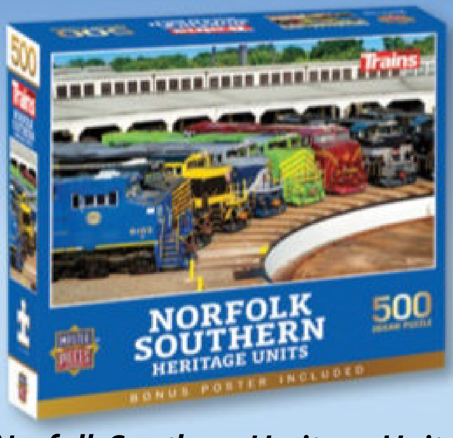
Boarding the 20th Century Limited

Trains
BIG BOY NO. 4014
500
BONUS POSTER INCLUDED

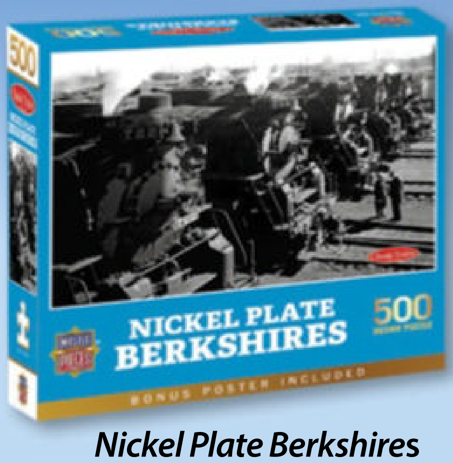
Big Boy No. 4014



Golden Moment for Rio Grande Southern



Norfolk Southern Heritage Units



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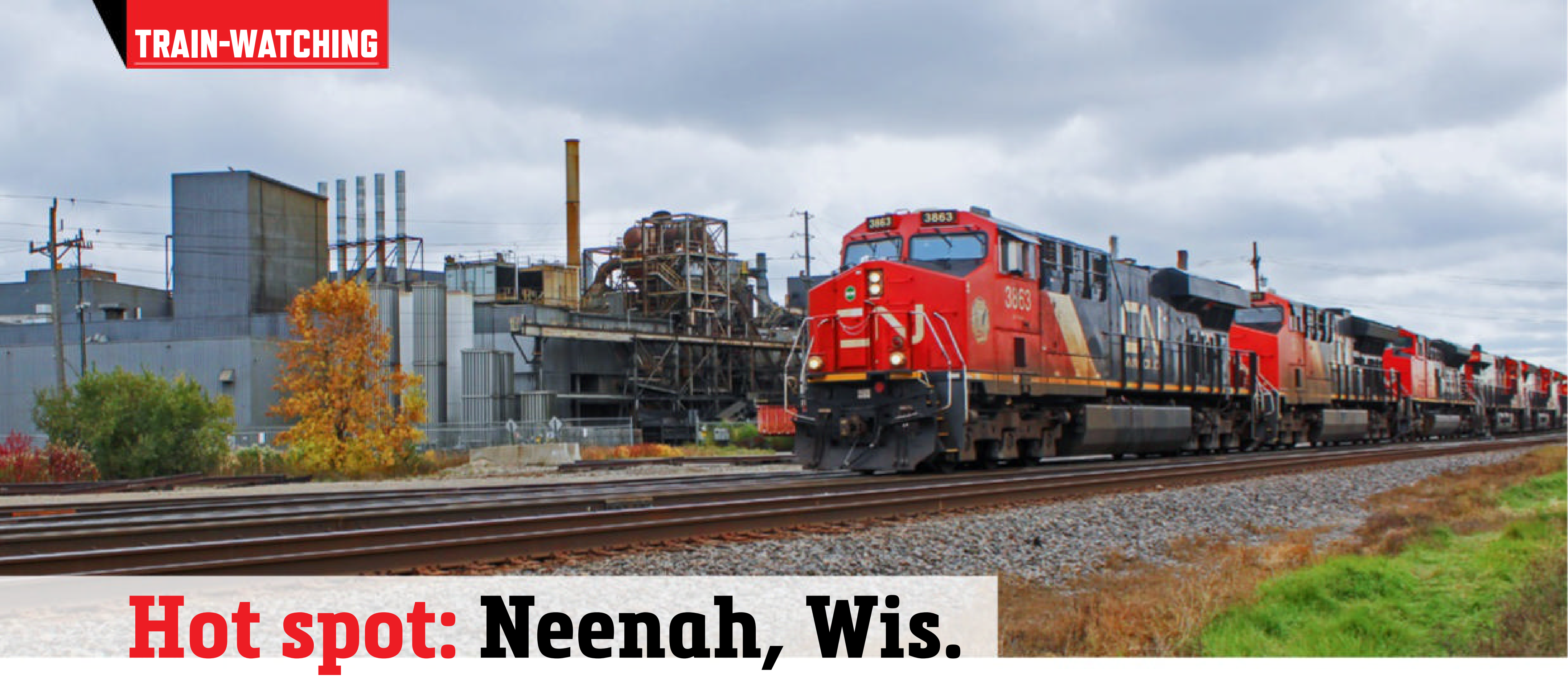


Hot spot: Neenah, Wis.

Access, variety make this a good Midwestern train watching venue

▲ **That's Neenah Foundry in the background, home to thousands of manhole covers. In the foreground, Canadian National No. 3863, a GE ES44AC, leads a string of seven locomotives, five are being towed. It's Oct. 8, 2022. The tracks in Neenah offer great access. This shot was taken from the sidewalk along Harrison Street.** Three photos, Bob Lettenberger

NEENAH, WIS., IS ONE OF THOSE TOWNS you have probably never heard of. There is, however, a good chance that something from Neenah impacts your life every day. Take a good look at the next manhole cover you cross. If it's cast with the words "Neenah Foundry Co., Neenah, WI," you now know the town we are talking about.

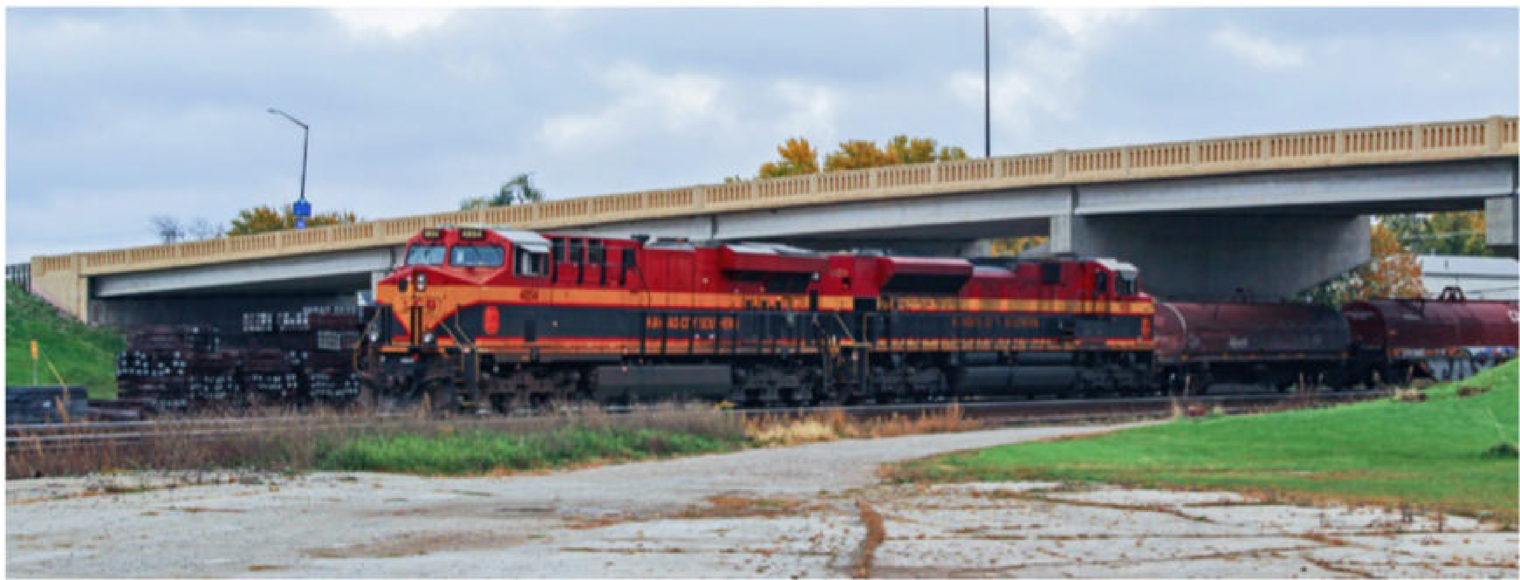
LOCATION: We are on the west shore of Lake Winnebago about 2 hours north of Milwaukee and an hour southwest of Green Bay, Wis. Today, Neenah is Canadian National territory. Historically, the Chicago & North Western was first to arrive here in 1861, as it built north from Oshkosh, Wis., on its way to Green Bay. The original Wisconsin Central (later Soo Line) built into town in 1880. The Milwaukee & Northern (Milwaukee Road) was the last to show up, reaching Neenah in 1881. Why all the railroads? Neenah produced a ton of paper and other industrial products, like manhole covers. Today, there is still plenty of railroad activity, just concentrated in one road.

RADIO FREQUENCIES: 160.785 Neenah Subdivision, 160.845 for the yard, 161.07 or 161.125 for switching and yard.

TRAIN WATCHING: The Canadian National tracks are easily accessed in Neenah. The line runs through town following Harrison Street, which is either next to the tracks or a block away. Once across Main Street, the tracks cross and follow Lake Street. Between Main Street, on the north end, and Bell Street, on the south end, the city has worked to close virtually all grade crossings, replacing them with viaducts at Main Street, Winneconne Avenue, Cecil Street, and Bell Street. The viaducts all have sidewalks and offer good positions for elevated photos. There is ample street parking available but plan for some short walks to ideal photo locations.

Neenah is on CN's line from Chicago to International Falls, Minn./Fort Frances, Ontario, where the line meets the Canadian transcontinental route.

The CN through Neenah offers a varied run of trains. You will see locals serving industries with covered hoppers for plastics, gondolas for scrap metal, and boxcars for paper products. You will see through trains made up entirely of oil tanks, auto racks, or double-stacked well cars. With Precision Schedule Railroading, mixed merchandise trains are longer with interesting intra-train blocking. Most through trains will have DPUs about two-thirds of the way back or at the end. Through trains can have foreign power, which makes for interesting watching and photos.



Emerging from under the Main Street bridge on Oct. 8, 2022, Kansas City Southern No. 4854, a GE ES44AC, leads a merchandise train north. Foreign, run-through power is common on trains in Neenah.

If you don't have a scanner, watch the signals just north of Winchester Road and south of Cecil Street for an indication of south bound trains. There are signals just north of Bell Street to watch for northbounds. The signals will normally display red and will change aspect when a train is approaching. Once a signal changes it can take 30 to 60 minutes for a train to arrive.

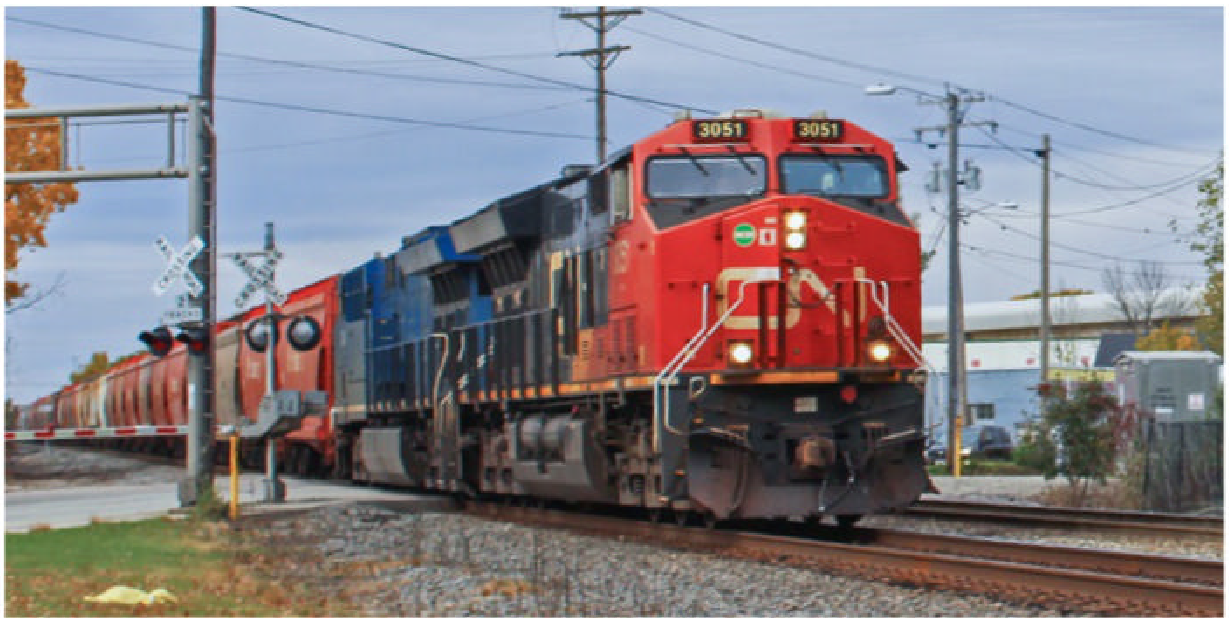
BEST VIEWING: Trains will come through Neenah solo or in groups of two to four. For multiples, it will usually be a combination of north and southbounds. The multiples will meet and pass in town. Northbound trains are held around Bell Street when preparing for a meet.

As the tracks run north-south, early morning and late afternoon offer good shadows and contrast on the respective sides of the rails. Also, looking north from the Main Street bridge is an interesting S-curve. Good photos can be had from either side of the curve.

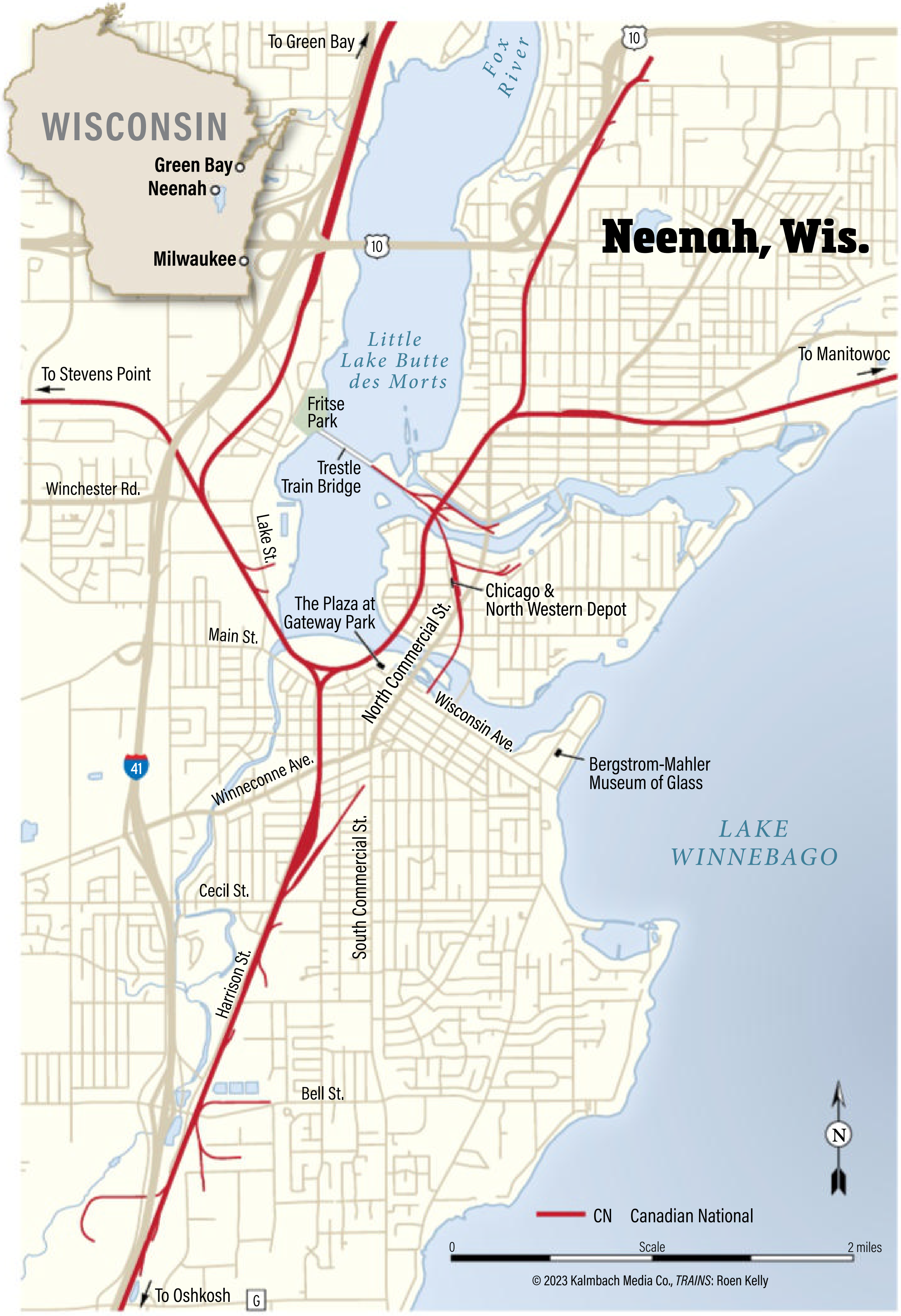
If you're looking for industrial switching or yard shots, stake out one of the bridges. Most of the industrial action is on the east side of the tracks. Street-level access is difficult. The Neenah yard extends from Winneconne Avenue south to Cecil Street. The Cecil Street bridge offers great views of the yard switching action.

Lastly, the C&NW Neenah depot still stands. Built in 1892, the depot is located at 500 N. Commercial St. Architecturally, the stone and brick depot was designed by Charles Sumner Frost in the Richardsonian Romanesque Style. Frost designed a number of significant depots for the C&NW. The depot has been restored and is now the offices of a local architectural firm.

FOR THE FAMILY: While you are watching the trains, the rest of the family may wish to stroll downtown Neenah, which offers a collection of unique shops and eateries. If you are in town during the winter months, visit The Plaza at Gateway Park, which is part of downtown. The Plaza offers outdoor ice skating, fire warming pits, and Globe Coffee for seasonal beverages. A visit to the Bergstrom-Mahler Museum of Glass would be a great experience. The museum exhibits the world's largest collection of paperweights along with plenty of other glass works. Neenah has numerous parks with lake views and hiking trails. For the railroad enthusiast, a visit to Fritse Park is a must. Here you can walk the Trestle Trail, which is the old C&NW bridge across Little Lake Butte des Morts. Finally, wrap up your train watching day with a visit to Cranky Pat's Pizza at the corner of Cecil and South Commercial Streets. This local institution has been rolling out thin-crust pizzas since 1955. — *Bob Lettenberger*



Crossing Lake Street, on Neenah's north side, Canadian National No. 3051, a GE ET44AC, leads a merchandise train made up of mostly covered hoppers and tank cars into town.


To Green Bay
Fox River
10
WISCONSIN
Green Bay
Neenah
Milwaukee
10
Neenah, Wis.
Little Lake Butte des Morts
To Manitowoc
To Stevens Point
Fritse Park
Trestle Train Bridge
Winchester Rd.
Lake St.
Chicago & North Western Depot
The Plaza at Gateway Park
Main St.
North Commercial St.
Wisconsin Ave.
Bergstrom-Mahler Museum of Glass
41
Winneconne Ave.
LAKE WINNEBAGO
Cecil St.
South Commercial St.
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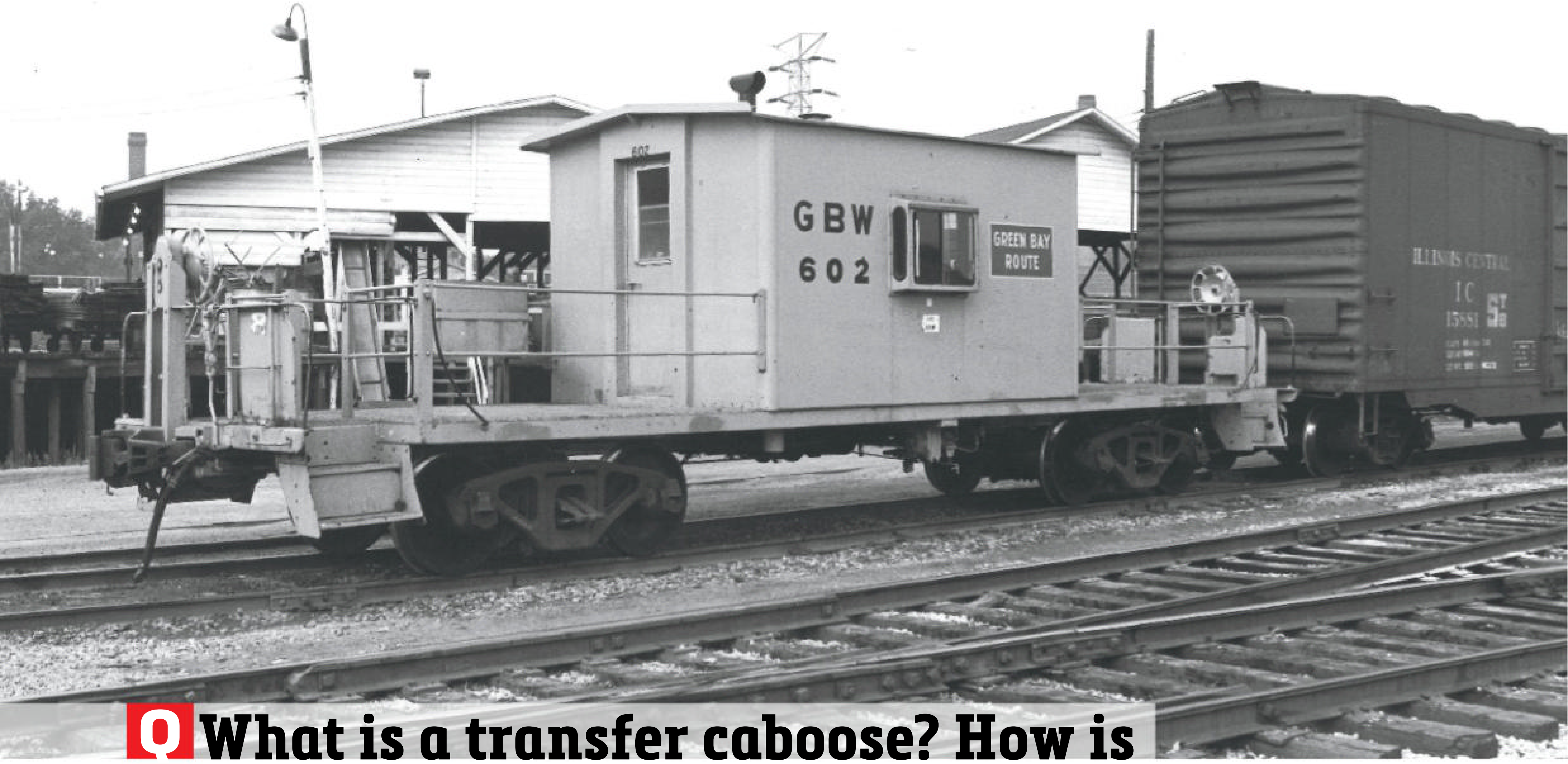

Q What is a transfer caboose? How is it different from a regular caboose?

– John Rose, St. Francisville, La.

▲ **The transfer caboose provided basic shelter for the local crew while running between yards. It was a working platform, affording expanded visibility and quick, safe access to the ground for switching. Even some smaller railroads like the Green Bay & Western had transfer cabooses. Here No. 602 departs GB&W's Norwood Yard in Green Bay, Wis., in December 1973.** Jim Hediger

A As the old proverb states: "Necessity is the mother of invention." Herein lies the story of the transfer caboose.

During the 1920s, interchange traffic between railroads increased dramatically at major terminals. At times, the interchange trains would become rather long. With traffic growth also came more switch jobs working businesses within a city or industrial zone. Accommodations were needed for these local train crews while on the road, even if it was for a shorter distance between yards or on an industrial branch — generally less than a 20-mile trip. The already proven caboose was the answer.

There were two complications with this idea. The style of railroad operation in the 1920s put a squeeze on the existing caboose inventory for many railroads. It was preferred to have a fully equipped caboose trailing a freight train on the main line as opposed to traipsing around behind transfer jobs or local switching runs. As transfer runs and local switching developed, train crews found that the facilities needed in a caboose were different for those staying in town and those heading out over the road. The transfer caboose is born.

The transfer/local crew needed more visibility than what was available from the cupola of a standard caboose. They also needed to get on and off the caboose quickly and safely for switching operations. Sheltering the crew from bad weather was a requirement of the local caboose. The local caboose did not need bunks, a larger stove, or restrooms (they were in the city). Finally, fewer windows on the local caboose would be a plus due to the increasing number of projectiles hurled at trains in the lesser neighborhoods of the big cities.

This necessity led many railroads to build their own transfer cabooses. The home-built route was followed to keep expenses to a minimum. The Union Pacific fabricated eight transfers in its Omaha shops during 1930. This is one of the first instances of a purpose-built transfer caboose. They began with the steel underframes from older wooden boxcars and built up from there. The UP's transfer cabooses were only 24 feet long. The Milwaukee Road repurposed the frames from 46 steam locomotive tenders as the starting point for its transfer cabooses.

At least a couple of railroads had regular cabooses that were hybrids. The Illinois Central fielded a road caboose with wide vision cupola and extra-large covered platforms at both ends. Inside are all the facilities of a full caboose — storage, bunks, big stove, restroom, a desk, and bench seating. The Missouri Pacific rostered a road caboose that looked exactly like a transfer caboose — small shack mid-car with extra-large open platforms. It even had full-sized bay widows for better visibility.

Necessity is the mother of invention. The transfer caboose, like the road caboose, was developed to meet the needs of a specific railroad job. *— Bob Lettenberger*

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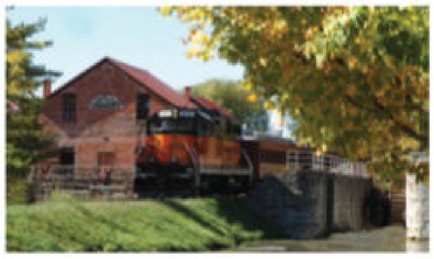

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	Average No. copies each issue during preceding 12 months	No. copies of single issue published nearest to filing date
a. Total number of copies (net press run)	91,961	87,211
b. Paid circulation (by mail and outside the mail)		
1. Mailed outside-county paid subscriptions	60,720	59,062
3. Sales through dealers and carriers, street vendors, and counter sales	6,415	5,623
c. Total paid distribution (sum of 15b1, 15b2, 15b3, and 15b4)	67,135	64,685
d. Free or nominal rate distribution		
3. By mail	329	337
4. Outside the mail	0	0
e. Total free or nominal rate distribution	329	337
f. Total distribution (sum of 15c and 15e)	67,464	65,022
g. Copies not distributed	24,497	22,189
h. Total (sum of 15f and 15g)	91,961	87,211
i. Percent paid (15c divided by 15f times 100):	99.51%	99.48%
16. Electronic copy circulation		
a. Paid electronic copies	1,996	1,860
b. Total paid print copies and paid electronic copies (sum of 15c and 16a)	69,131	66,545
c. Total print distribution and paid electronic copies (sum of 15f and 16a)	69,460	66,882
d. Percent paid (both print and electronic copies) (16b divided by 16c times 100)	99.53%	99.50%

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Nicole McGuire
Senior Vice President, Consumer Marketing.
Date: September 29, 2022

In the February issue

Pushed off the mountain

A farewell to Norfolk Southern's custom built SD40Es in helper service. Three generations of family railroading on the **CENTRAL INDIANA & WESTERN.** In the mid-1960s, huge volumes of southwest Virginia coal led **SOUTHERN RAILWAY** to innovate. Remembering Owney, the **RAILROAD POST OFFICE'S** mascot. A stray dog adopted by postal clerks, that racked up 143,000 miles aboard the mail cars.

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All Copy: Set in standard 6 point type. First several words only set in bold face. If possible, ads should be sent typewritten and categorized to ensure accuracy.

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RAIL SHOWS AND EVENTS

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JANUARY 28, 2023: The 31st Annual Great Tri-State Rail Sale. La Crosse Center, 2nd & Pearl Streets, La Crosse, WI. 9:00am-3:00pm. $5.00, under 12 free. Model, Toy & Antique Trains & Memorabilia, Sale & Swap Meet. 608-781-9383, www.4000foundation.com

FEBRUARY 4-5, 2023: Monticello 2023 Train Show. Saturday 10am-5pm and Sunday 9am-1pm. Berndes Center, 766 N. Maple St., Monticello, IA 52310. Tables $30. Admission: $5, children under 12 free w/paid adult. Monticello RR Club, PO Box 169, Monticello IA 52310 or email Ron Ackermann: rack611@gmail.com

All listed events were confirmed as active at the time of press. Please contact event sponsor for current status of the event.

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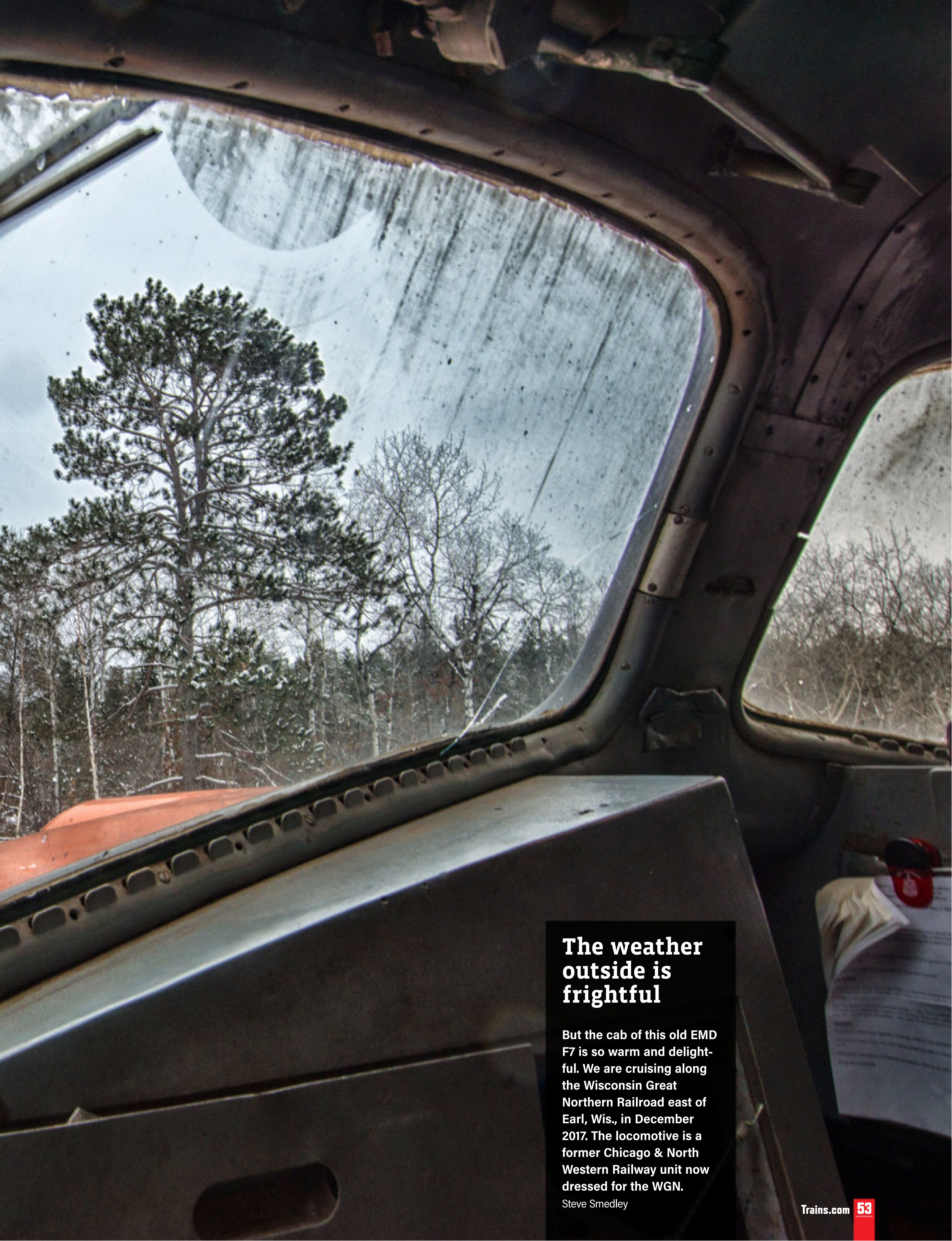
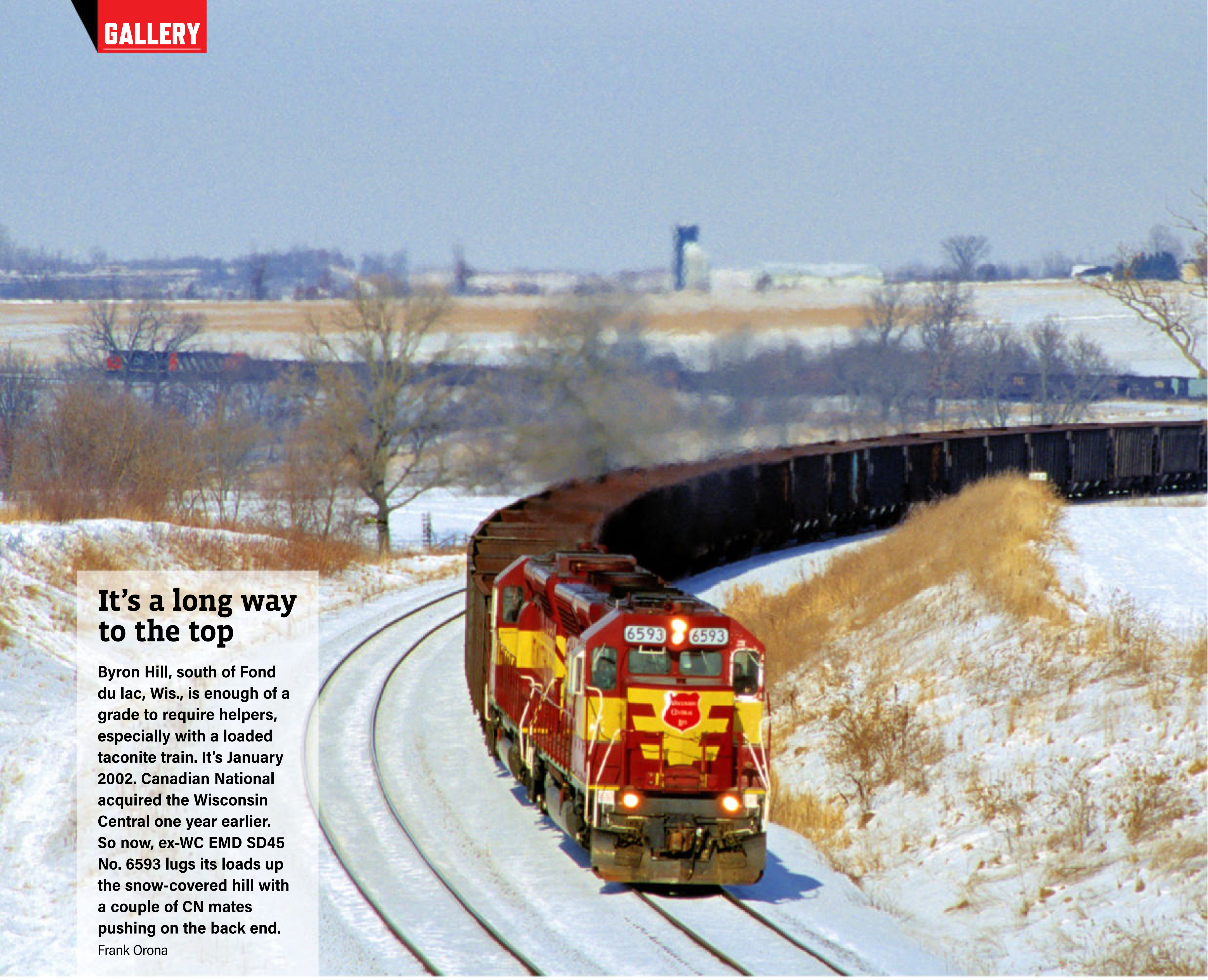


The weather outside is frightful

But the cab of this old EMD F7 is so warm and delightful. We are cruising along the Wisconsin Great Northern Railroad east of Earl, Wis., in December 2017. The locomotive is a former Chicago & North Western Railway unit now dressed for the WGN.
Steve Smedley



It's a long way to the top

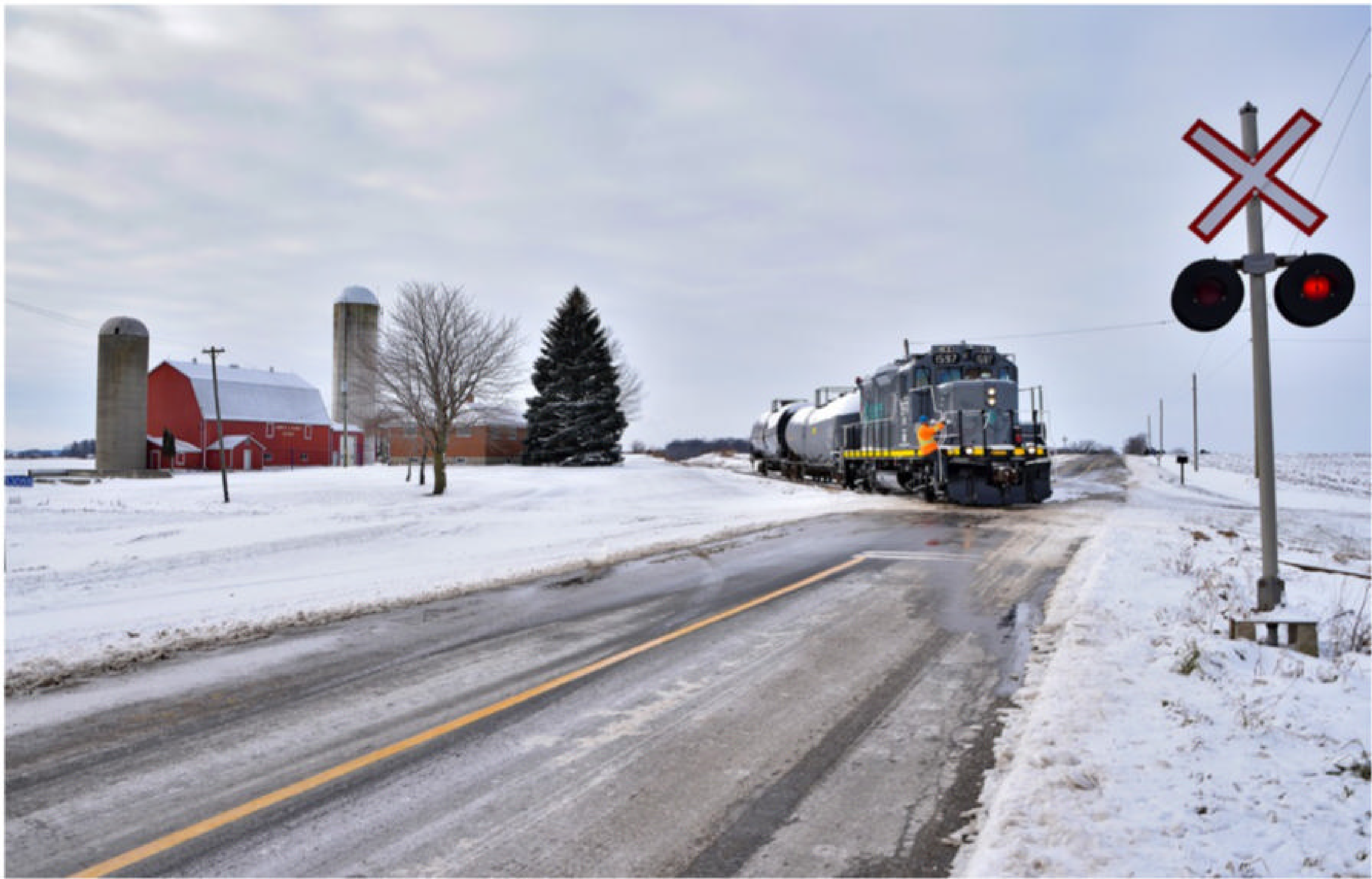
Byron Hill, south of Fond du lac, Wis., is enough of a grade to require helpers, especially with a loaded taconite train. It's January 2002. Canadian National acquired the Wisconsin Central one year earlier. So now, ex-WC EMD SD45 No. 6593 lugs its loads up the snow-covered hill with a couple of CN mates pushing on the back end.

Frank Orona

It's a cold job

The conductor hops back onto Gio Rail LDSX No. 1597 after protecting College Line in Corinth, Ontario. This would mark the first revenue run for Gio Rail on the previously dormant Canadian National Cayuga Subdivision. On this Jan. 4, 2022, the crew would run the unit solo from Tillsonburg to St. Thomas to lift the two tank cars and haul them to Tillsonburg to be spotted.

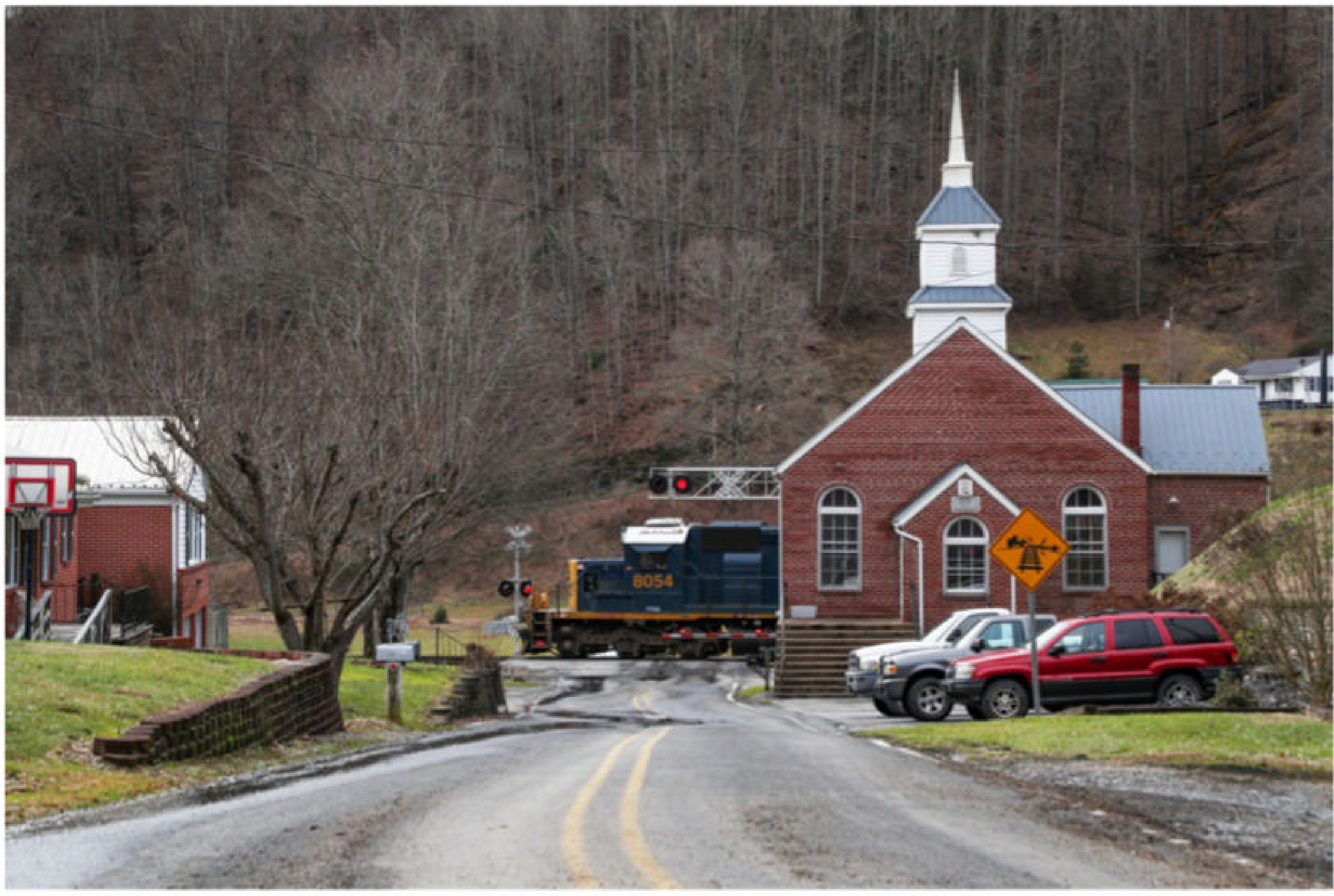
Kyle Stefanovic

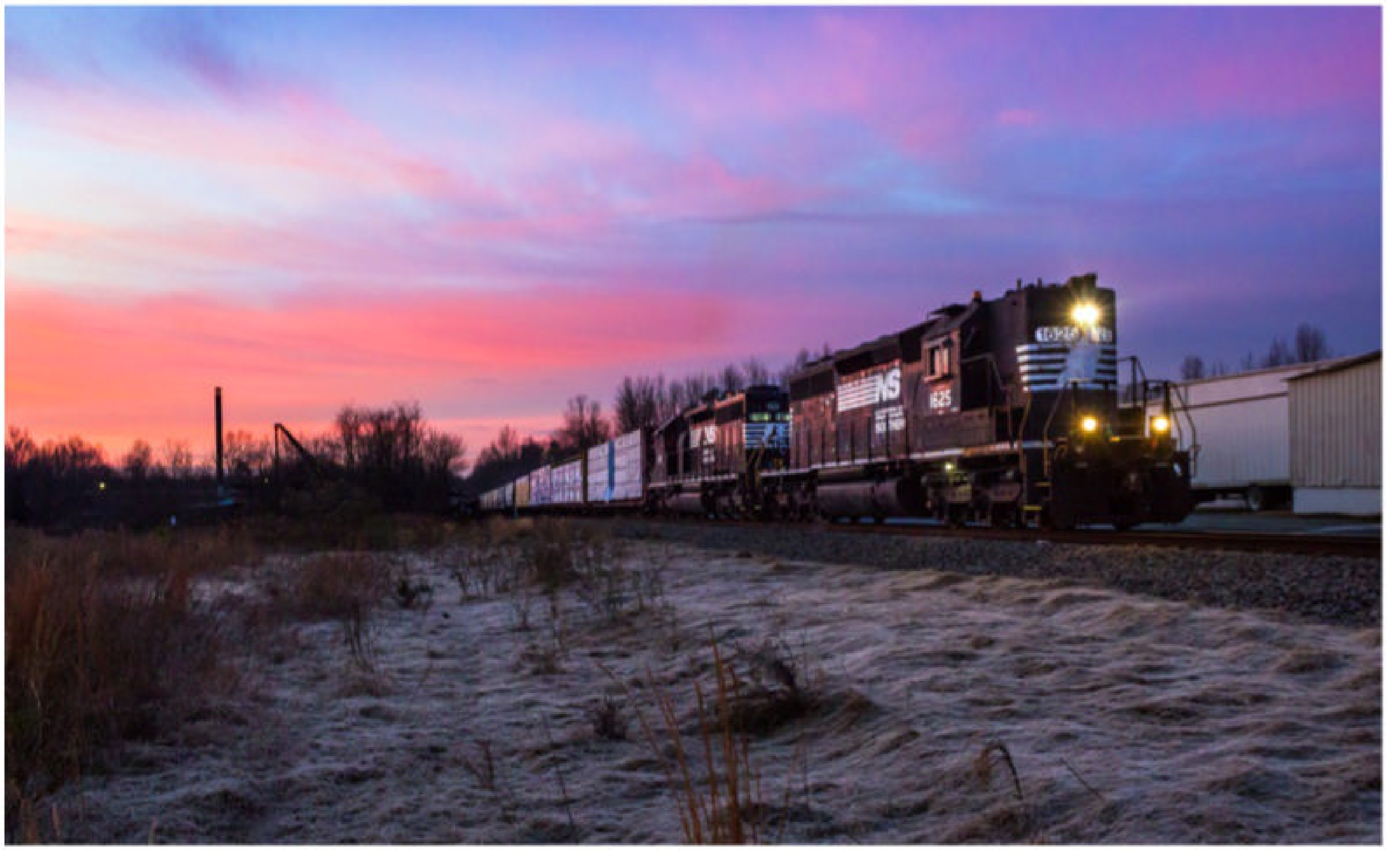


No snow

This is what winter looks like in the South. It's Dec. 29, 2018, to be exact, in Toecane, N.C. No snow, just rain, as CSX Transportation manifest Q693-28 passes through town. That's EMD SD40-2 No. 8054 in charge of the southbound today.

Jonathan McCoy

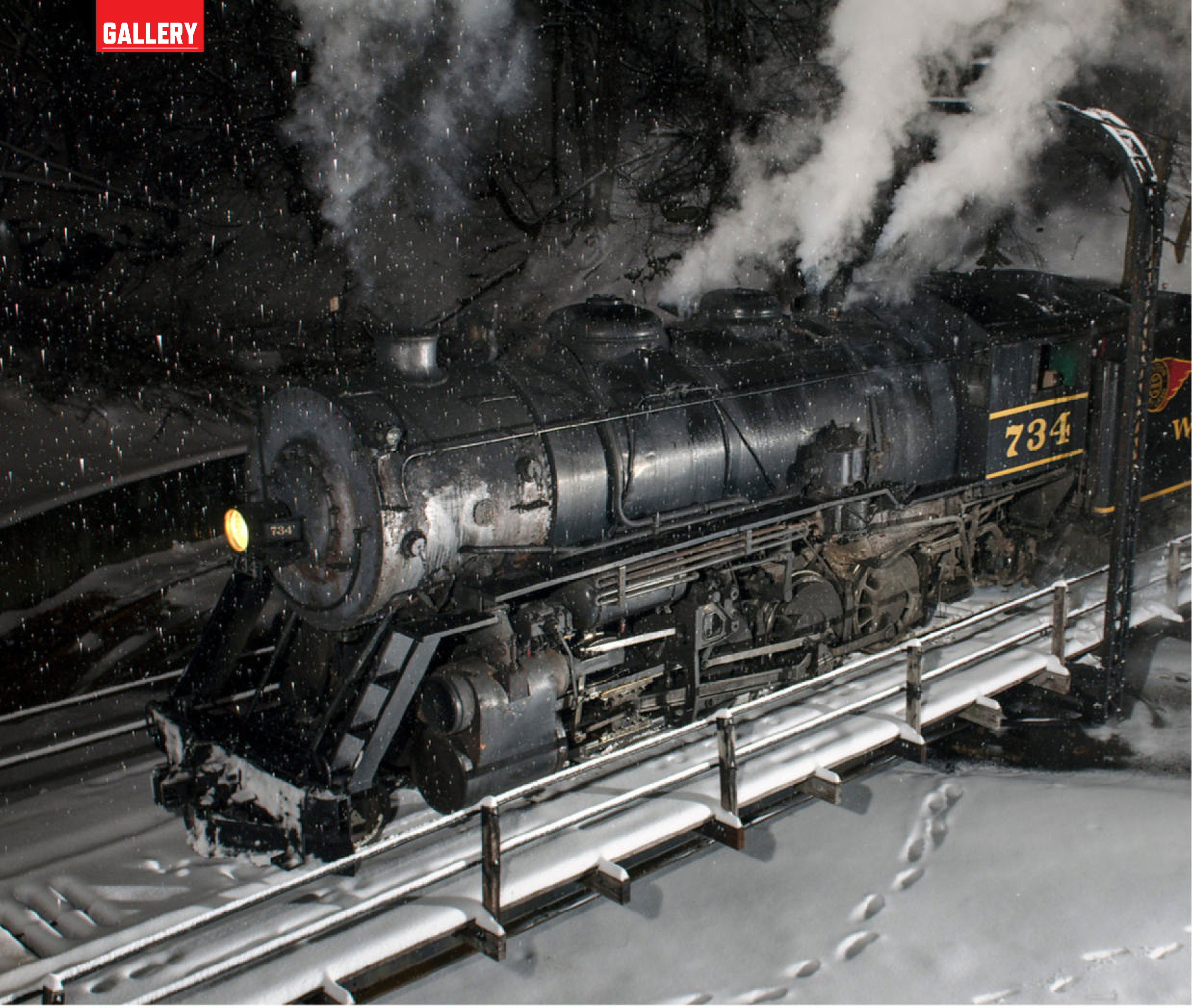




Dawn cold

It's Dec. 27, 2018. As the year draws to a close, a winter sunrise lights the surroundings of Liberty, N.C. Aging ex-N&W, now Norfolk Southern high-hood EMD SD40-2 No. 1625 leads local train P10, which is heading westbound towards Greensboro, N.C.

Luke Harwell



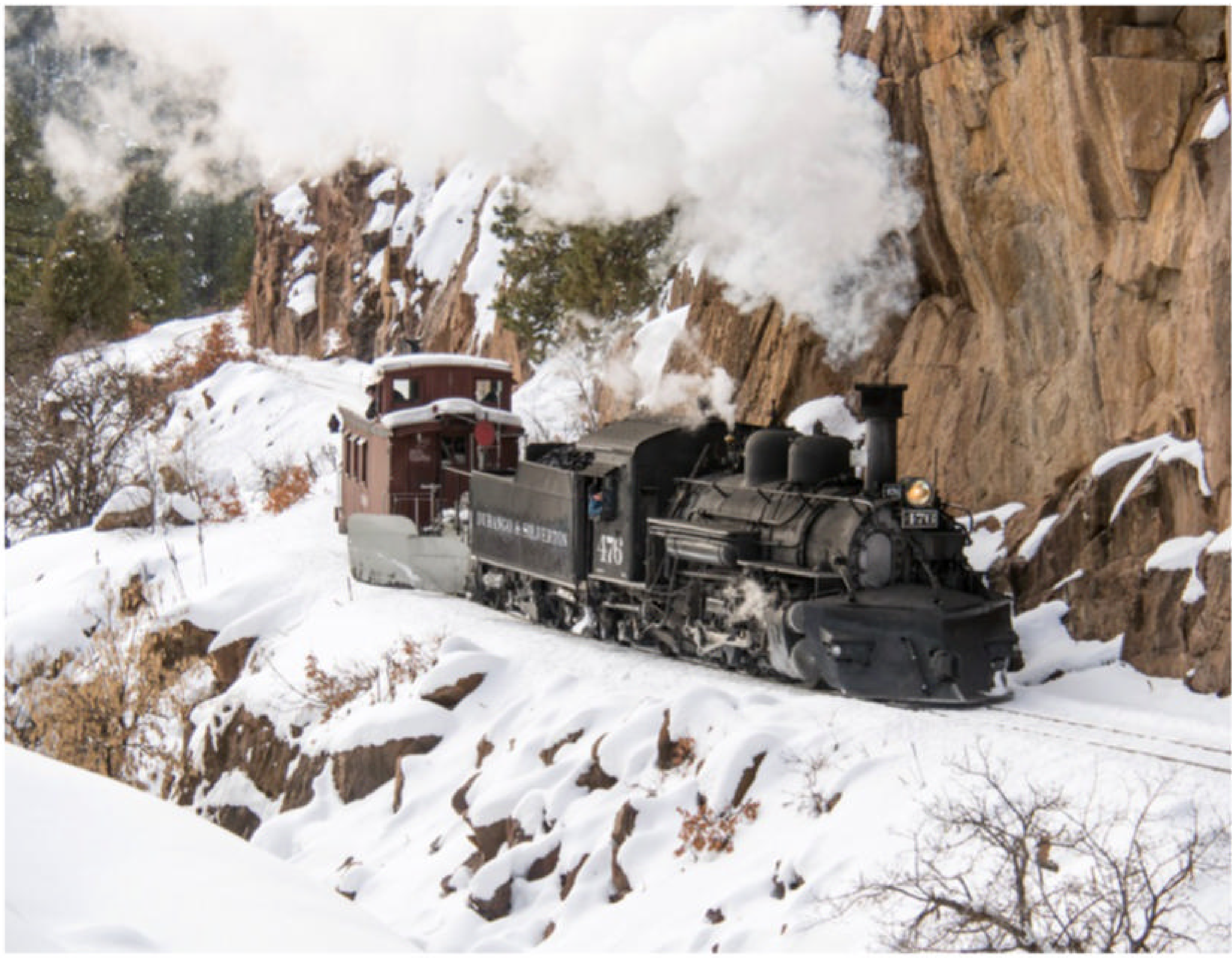
Do the Christmas twist

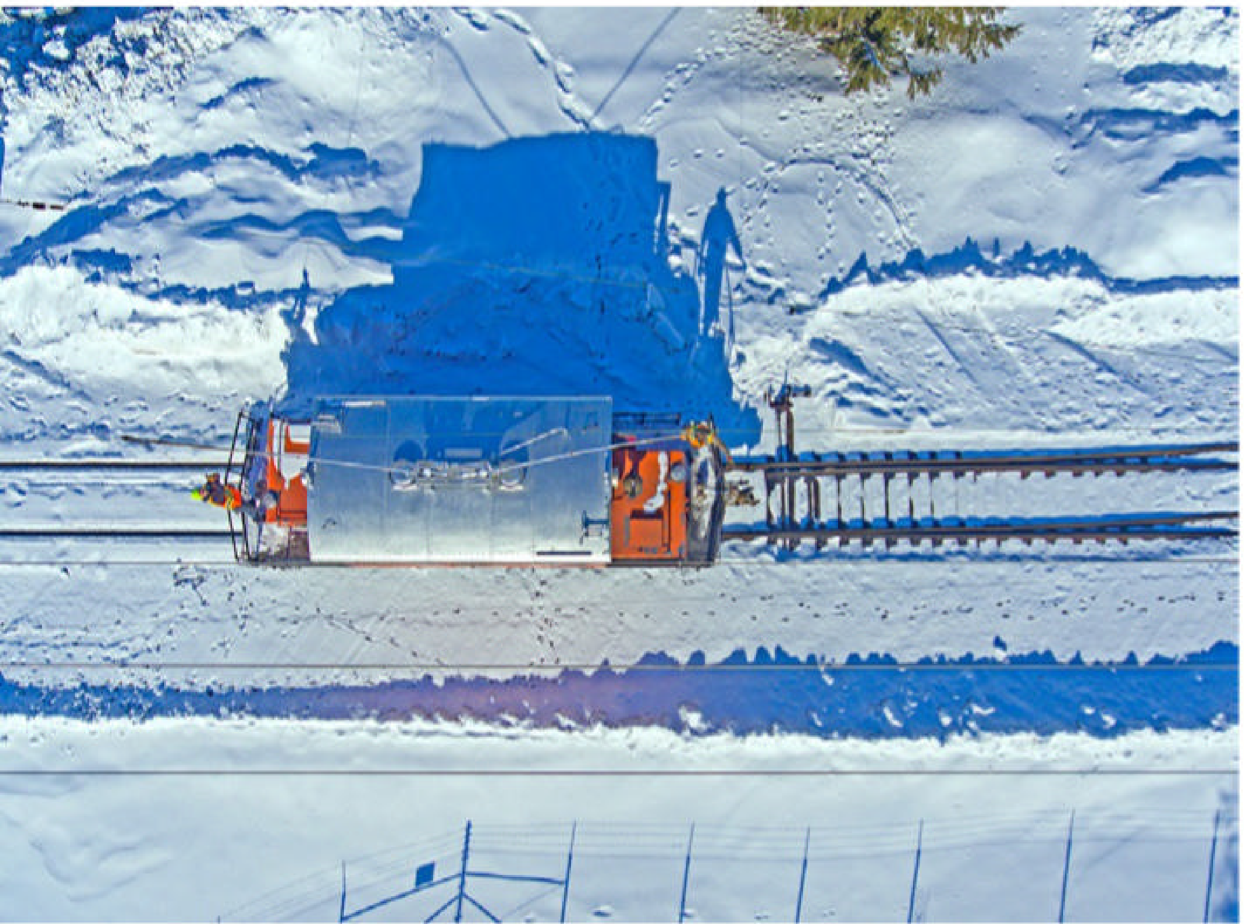
Now wearing the colors of the Western Maryland Railway and running on the Western Maryland Scenic Railroad, 2-8-0 No. 734, ex-Lake Superior & Ishpeming Consolidation No. 34, prepares for a Christmas twist on the turntable at Frostburg, Md. Snow is falling and piling up on this Dec. 14, 2013.
William Gill

WESTERN MARYLAND

Comin’ ’round the mountain

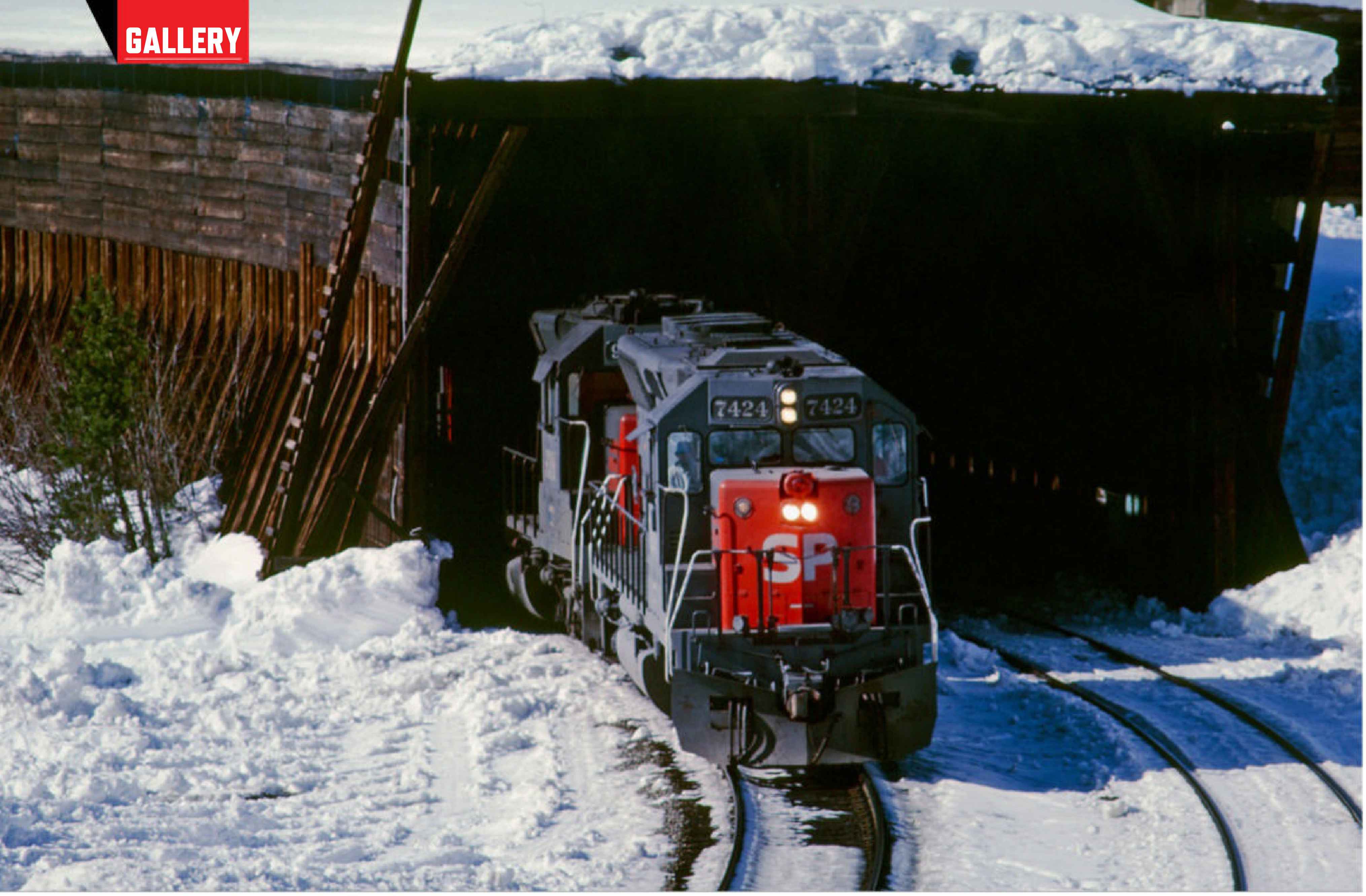
The twists and turns along the Durango & Silverton Narrow Gauge Railroad on its route above Shalona Lake, Colo., make an interesting run for No. 476, a class K-28 2-8-2. The flanger special is working the line on Jan. 9, 2019. Lawrence Gross





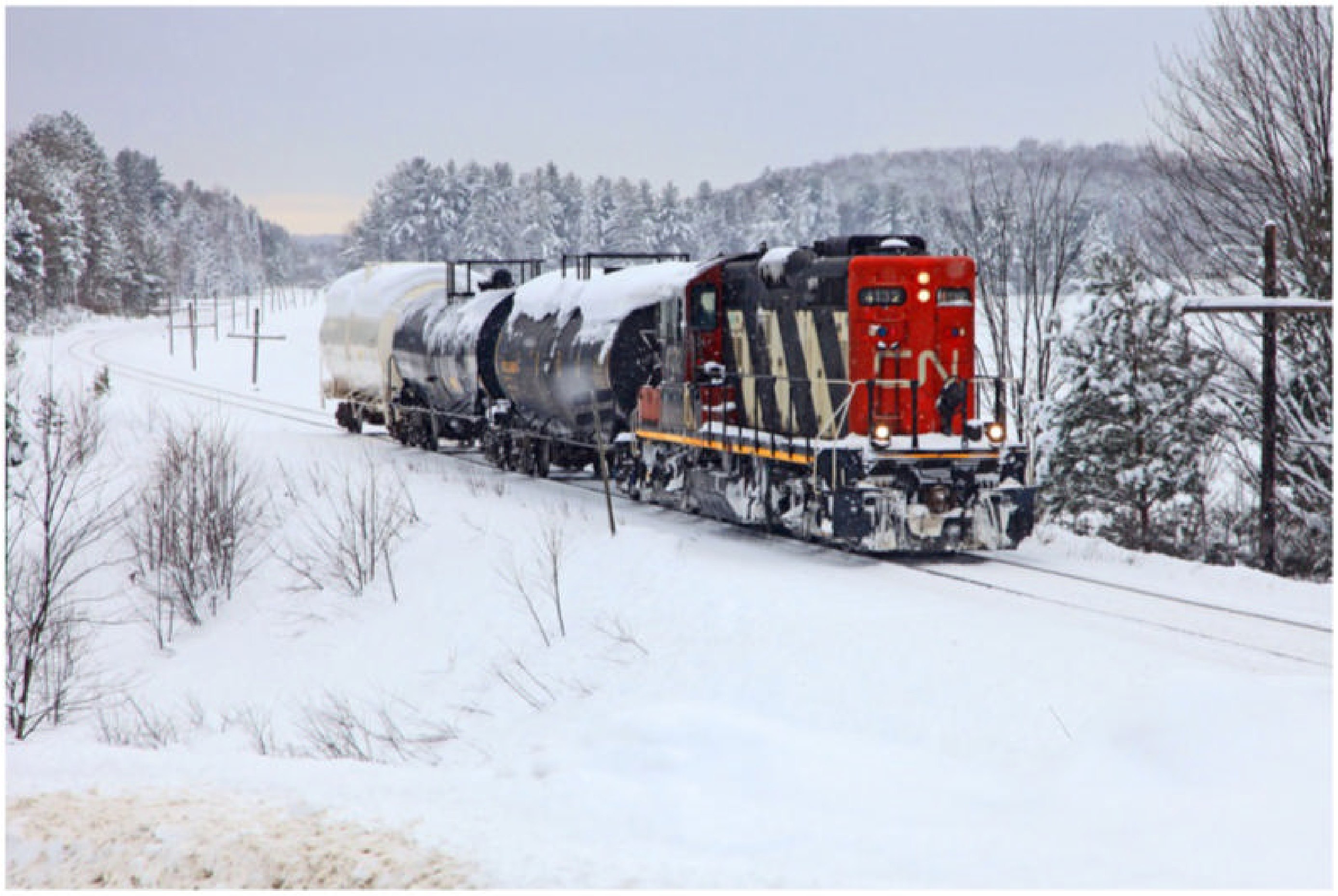
From above

Looking down on Iowa Traction Railroad’s No. 50, a century-old Baldwin-Westinghouse steeple-cab electric, offers an interesting perspective on winter railroading. It’s March 10, 2019, in Mason City, Iowa, and the steeple-cab crew is working through the chore of switching in the snow. Craig Williams



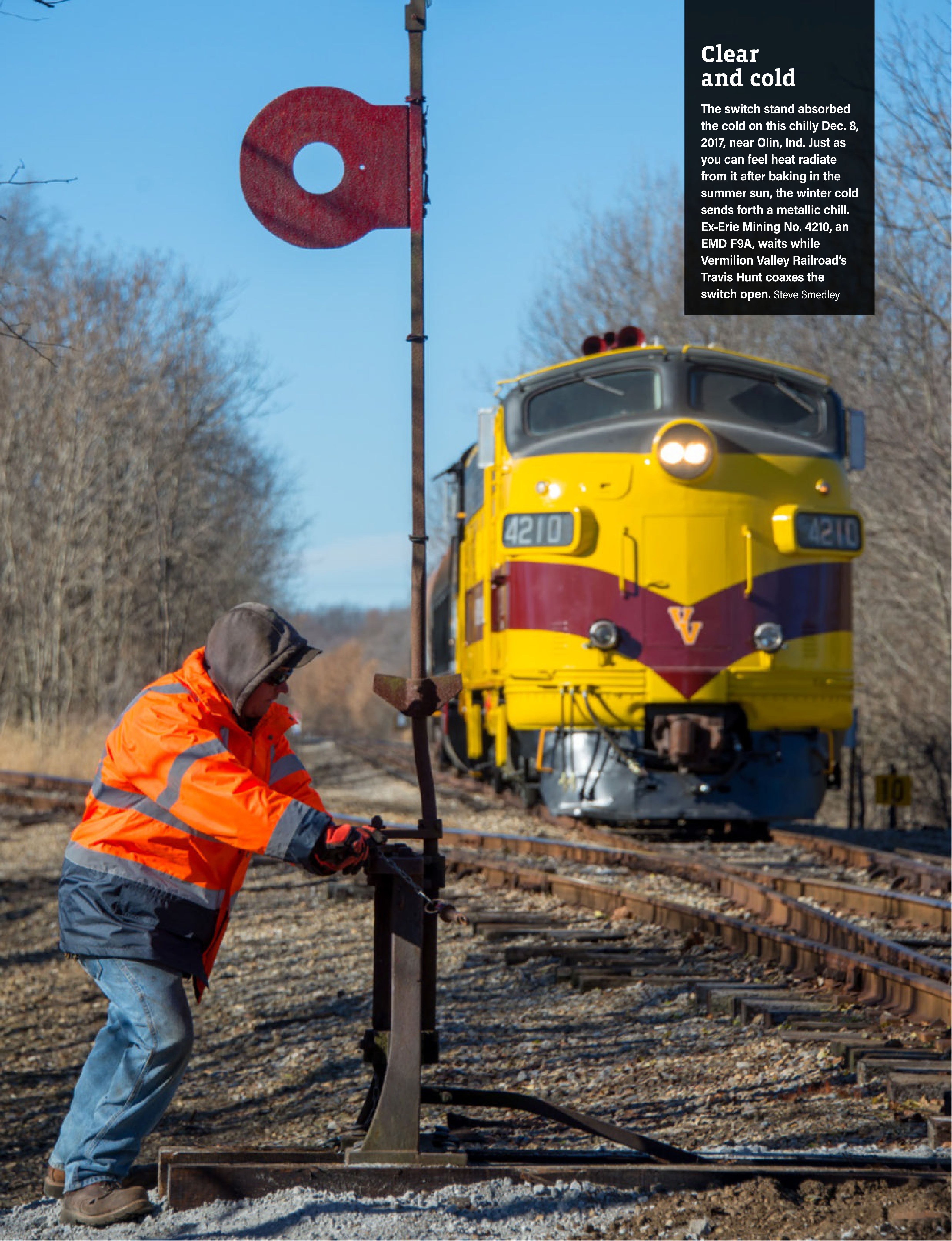
Into daylight

The legendary Norden, Calif., perched atop the Southern Pacific's Donner Pass, is the city inside a snowshed. Southern Pacific No. 7424, an EMD SD45R, emerges into daylight and accumulated snow on this December 1982 day as it continues its eastbound trek. Steve Schmollinger



Another day on the job

For Canadian National No. 4132, a GMD GP9RM, it's another day on the job, albeit a snowy one. Seen here on Jan. 9, 2014, the locomotive and short train are northbound at Martins, Ontario, milepost 141 on the CN Newmarket Subdivision. The trip north is made Monday, Wednesday, and Friday with a return to Longford Mills, Ontario., on Tuesday and Thursday.
Wayne D. Shaw



Clear and cold

The switch stand absorbed the cold on this chilly Dec. 8, 2017, near Olin, Ind. Just as you can feel heat radiate from it after baking in the summer sun, the winter cold sends forth a metallic chill. Ex-Erie Mining No. 4210, an EMD F9A, waits while Vermilion Valley Railroad's Travis Hunt coaxes the switch open. Steve Smedley

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